AMERICAN RAILROAD JOURNAL,

AND

IRON MANUFACTURER'S AND MINING GAZETTE.

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Saturday, January 8, 1848.

CORRECTION.—By referring to page 823 of the last volume, Baltimore and Ohio Railroad Report, in the table showing the comparative expenses of the years 1846 and 1847—under the head of "Wages—Conductors and Brakemen," it will be seen that an error is noted. By substituting an 8 for the 0 in the upper line, it will, as it should, read $18,246, and the increase of expenses in this item will be as put down, $4,274 22, over that of 1846.

Baltimore and Ohio Railroad and its extension to the Ohio.

We find in the Baltimore American of the 7th, an able letter written by MR. MCLANE, the president, to the directors, of this company, developing his plan for the extension of the railroad to the Ohio river. It is clear in its suggestions, and forcible in its arguments. It recapitulates the various possible resources of the company, viz: state bonds, subscription by Virginia, etc., resources which ought to be available, but unfortunately may not be for some time to come, and discusses their probable availability; but finally settles down upon, and forcibly recommends the adoption of a system which will ensure the completion of the work within a few years, and make it one of the most independent in the country. He shows that the receipts of the current year, to 1st October next, will be $1,400,000, of which $750,000 will be net income; which amount will put the company in a position, by liquidating the claim of the Barings, and increasing the working stock of the road, to apply at least $850,000 the first year, 1849, of the extension, and an annually increasing amount thereafter, until the work is completed, "if the plan now recommended be adopted."

According to the estimates, it will require $6,300,000 to complete the road to the Ohio, and put it in operation. Assuming these estimates to be correct, it will require the income of about seven years and a half, at $850,000 a year, to complete the work; but we do not hesitate to say, that if this plan shall be adopted, the work may be as well completed in *five* as in seven years; and if the share holders will cheerfully adopt this course, and receive annually the amount of their dividends in stock, instead of dividing the net earnings of the road, they will be able, after three years' earnings, or $2,500,000 shall have been expended, and fifty or sixty miles of new road shall be in use, to dispose of the bonds of the state, on terms acceptible to the company, and thus be enabled to push on the work with renewed energy,

Mr. McLane says that "Previous to the opening of the road from Harper's ferry to Cumberland, an elaborate report, estimating the probable traffic and profits of the work after its completion, was prepared by the then chief engineer. The method pursued upon that occasion was founded upon established principles and universal custom. It assumed, from the best lights at command, the sources to be reached by the road, and the amount of traffic to be attracted by the facilities offered for its accommodation; and calculating upon well known principles, and foom the experience already acquired, the cost of transportation of both passengers and burthen, it determined the probable amount of net revenue to be produced. From the accuracy of such a method, there is little liability to error. The estimates of Mr. Knight, in the report referred to, have been, in fact, more than justified by the result. The amount of trade and travel has been greater even than he estimated; the company have been able to maintain higher charges than he allowed; the cost of transportation has been reduced below the maximum he assumed, and both the aggregate revenue and the net earnings have exceeded his expectations.

"In fact, it may be taken to be almost universally true that the impulse given to the developement of every branch of labor, and to all the sources of commerce, by improved facilities of reaching a market, uniformly swells the amount of traffic beyond any previous anticipation. This fact alone would show the utter impossibility of estimating with any precision at present the extent of the vast stream of trade that may be expected to flow upon this work when finished to the Ohio river. If the results to which I am now about to allude from the opening of the road only to Cumberland have so far exceeded all reasonable anticipation, those that would surely follow a finished work in proximity with the great valley of the Mississippi, although they might not be susceptible of any precise present estimate, imperatively require that the company should not stop at any temporary inconvenience to realize them.

From the last annual report it appears the gross receipts from the *Main Stem* amounted to the sum of $1,101,936 58, being an increase of $205,621 36, or upwards of 23 per cent. over those of the preceding year, and that, at the same time, the cost of working the road, though liable to some unusual expenditures, was less in proportion than in previous years.

That the gross receipts would have been considerably more if the company could have provided suitable facilities for the accommodation of the existing trade, independently of new developements, there can be no doubt. The gross receipts being, as shown, $1,101,936 58, and the expenses of working and management, including some extraordinary items, being $590,828 98, the net earnings of the year amounted to $511,107 60—upwards of 7½ per cent., upon the capital of $7,000,000. The same report shows the application of a part of this balance to objects of *capital* and to certain temporary engagements of the previous year, as well as the consequent reduction of the dividend to 3 per cent., or $210,000.

"The amount of traffic, both passengers and burthen, since the extension of the road to Cumberland has been steadily on the increase, even with the inadequate accommodation the Board have been able to provide. During the first three years the increase was fully 20 per cent. per annum, and from 1845 inclusive the regular increase has not been less than 20, and has varied from 20 to 25 per cent.

"During the part of the current year already elapsed there has been an increase over the corresponding portion of the preceding year—notwithstanding the high price of produce in the year ending the 30th of September—of at least 42 per cent., and from the steady improvement in every branch of trade, the perpetual accumulation of passengers and produce of all kinds, and the recent establishment of a higher rate of charge during the winter season; it is quite certain that the rate of the increase, throughout the year, will not be less than 30 per cent."

From the *more than* realization of the estimated earnings of the road, after its extension to Cumberland, he assumes—and very justly so, we think—that the present estimates of future earnings and net profits may be relied on.

The time allowed, by the legislature of Virginia, for completing the work, is twelve years, from 6th of March, 1847—but Mr. McLane says:

"I hope, and am not without great confidence, that we would be able to complete the work in little more than half the limit required by the annual application of $850,000, or $70,833 per month. I have an

abiding confidence in the regular, steady augmentation of the business and profits of the road between Baltimore and Cumberland; and I see no reason to suppose, with the increase in population and progressive developments encouraged by the improving facilities of the road, and the greater economy of working it, that the increase by which the past has been steadily characterized should not attend the future operations, if not in the same ratio, certainly to at least one half or ten per cent.

It must be remembered, moreover, that from any point, from Cumberland to Fairmount, on the Monongahela river, a distance of 129 miles, and 59½ miles from the Ohio river, the road, or any part of it, may be finished and put in operation at the pleasure of the company. At the mouth of Savage it would reach the great coal and iron region, and thence, even no further than Armstrong's, a distance of 55 miles, and near the State line, it would penetrate the fertile glades, pass in immediate proximity with the Northwestern Turnpike, and, at once, not only compete more successfully with the line from Cincinnati to Sandusky, but command the transportation of the trade in lumber, live stock, produce and merchandise of the northwestern part of Virginia, which could not fail to be attracted to Baltimore as the preferred market. The entire cost of this part of the line, with the necessary additional power west of Cumberland, is estimated by Mr. Latrobe at $1,600,000, and the immediate net profits of this part of the road, from the above resources, alone, have been estimated by the same engineer, at not less than 8 per cent., independent of the further receipts from the farther transportation to Baltimore.

So that this part of the road may be finished and in operation, with the adequate additional power, with no other aid than the annual surplus, as above estimated, contributing its entire profits to the further extension of the work, in a period of two years.

From Armstrong's to Fairmount, on the Monongahela, the distance would be 74¼ miles, and the cost of this section of the road, including the sum already allowed for the additional power, for immediate use, would not exceed $2,232,000; and it would therefore follow that, with an application of $850,000 of the annual surplus, in little more than four years from the 6th March, 1848, the work would be in full operation to Fairmount, and, contribute its profits to the assistance of the extension of the line west. The annual gross receipts of the road from Baltimore to Fairmount are estimated, by the present chief engineer, at $2,153,743, and the net profits at about a moiety or 9 1-6 per cent. upon the total capital invested."

If it were possible for us to say anything, in addition to what this able letter contains, in favor of the plan suggested, we should feel it a duty to add it here; but, as we cannot, we will merely say that we hope it will be at once adopted, and every possible effort made to carry it into extension.

Atlantic Dock, Brooklyn.

The following brief description of this important improvement at Brooklyn, N. Y., is from the N. Y. Courier and Enquirer. Though good, as far as it goes it is only a beginning of a description of the Atlantic Dock. We, also, visited it in May last and again a few days since, and found that great progress had been made since we were last there.

The Dock company proper have a water front of over *three thousand* feet, upon the entire length of which—with the exception of two hundred feet in the centre, for the entrance of vessels to the basin—they have constructed one of the most substantial piers in America. It is one hundred and fifty feet wide, and is to have a row of storehouses, the entire length, nearly one-half of which are already erected, and in use. The writer says,—

"We took advantage of the beautiful weather of yesterday to make a visit to the U. S. Public Stores, at the Atlantic dock, and there saw in operation the beginning—beautiful enough as beginings—but quite inconsiderable to what it is like to become—of this new trade.

But first of these admirable stores—admirable in situation, in construction, in multiplied conveniences of every sort. These have been built since 1st April last. Eight large double stone stores on the North part of the Atlantic dock basin—solid structures—the whole 400 feet in lenght, by 80 feet in depth. They are raised on piles closely driven and the beams and supports are abundant, and the uniform exterior, of hammered grey stone—a luxury we understand of the liberal builders, who were not bound by their contract with the Government, for whose use these stores are built, to any thing more ornamental than rough stone—give them quite an architectural air that satisfies the eye. The line of the window sills is straight as possible—proving that there has not been the least settling of the mass since it was erected.

There are eight more stores, precisely similar ones building—also for Government use—and the whole will constitute the safest, and most accessable, and most convenient public stores any where in the service of Government.

They stand in blocks of eight, on each side of the entrance, 200 feet wide, into the basin.

On the river front is a solid floor 35 feet in width, between the water edge and the stores. The depth of water is 24 feet. The stores stand on the pier some 150 feet wide, which separates the basin from the river; and in the rear is a floor equal in width with that on the other front. Here barrels of flour can be rolled out of the vessels into the stores, without being soiled, and are as bright when reshipped as when first taken from the canal boat.

Vessels discharging wheat or corn, going into the basin, and lying alondside this range of stores—of which there are two others besides—a steam engine thrusts down into the hold a patent steam elevator which raises the cargo to any one of the stories where it is wanted. The grain is weighed as it comes in, by 25 bushels at a time—and then dropped into a receptacle—whence by distributors, also worked by the steam engine—it is conveyed laterally, or up, or down, along covered ways in endless succession, and with unfailing dispatch and accuracy.

A canal boat with its five or six thousand bushels of wheat, shall haul alongside the dock at 9 o'clock in the morning, and by 12, or the fartherest, 2 o'clock, it shall be wholly unloaded, and that without any other agency of human labor than the two or three hands of the boat, occupying themselves with keeping the grain heaped up around the *maw* of the elevator.

A canal boat arriving from Albany in the morning, loaded with flour and wheat, may be discharged in time to go back again the same evening from the Atlantic dock.

Vessels taking in cargoes, will occupy the river front, and they are loaded as rapidly and as completely, so far as putting the cargoes on board is concerned, without the intervention of manual labor, as in the unloading of canal boats.

All the arrangements in the whole process of this labor-saving machinery, are alike simple, and admirable."

Inside of this pier is a basin of over *forty* acres with a depth of water averaging twenty feet at low tide, with 22 feet on the inside and 24 feet on the outside of the main pier. The basin is to be surrounded by immense store houses, and its vicinity will, in a few years, be covered with fine brick buildiugs. The distance from the Merchants Exchange, to the basin, is about the same as to Spring and Prince streets; and a circle struck from the Exchange and Bleecker street, takes in the entire basin.

The capacity of this basin, as a safe place for shipping, is immense. There may be nearly one hundred vessels laid up to, and unloaded upon, the wharves at the same time; and three hundred more may be safely laid inside of the pier, waiting their turn.

This is undoubtedly to become the great storehouse and granary for the city.

In constructing this dock, there have been over a thousand building lots reclaimed from the water and low ground covered by high tides; and the adjacent high grounds have been lowered from 70 to 80 feet, thus bringing near 2000 lots to the regular grade of the city.

The stores are built upon rows of piles, driven by steam power. The depth of water in the basin has been obtained by dredging, and the material removed by the machine is used for filling up the lots adjoining the wharves, back of the basin.

This company was chartered in May, 1840, with a capital of one million of dollars, and the directors were

J. Depeyster Ogden,	Ab'm Bell,
N. L. Griswold,	W. R. Wadsworth,
Richard Irwin,	Wm. Kemble,
Henry Grinnell,	Asa Worthington,

Cyrus P. Smith.

The grading and filling has been done by Messrs. Voorhees, Carmichael and Stranahan, gentlemen well known as eminently successful contractors upon a large scale—who are largely interested in this work as proprietors. When commenced it was by many, deemed one of the *schemes* of the day; but it is, in reality, one of the most important and essential improvements ever undertaken, for the convenience of the increasing business of New York.

The Coal Trade of Pennsylvania.

We gave, in our last, the aggregate of the coal trade in Pennsylvania, for 1847, with the exception of Shamokin, and we now give the entire report of the anthracite coal business of the year, from that excellent and useful paper, the MINERS' JOURNAL, published at *Pottsville*, by BENJAMIN BANNON—who may be considered a fair specimen of the *very best anthracite* of the region-and the worst wish we have for him is, that every person who uses anthracite coal, as a fuel, would subscribe, and *pay*, for his paper.

We stated, in our last, that the increase of 1847 over 1846 was 620,698, whereas it should have been 638,317. The Journal says:

The following is the official quantity of coal sent to market the two past years, which we have procured at considerable trouble, and can be relied upon as correct.

Schuylkill.	1847.	1846.	Increase.
Railroad	1,360,681	1,233,562	127,119
Canal	223,693	3,440	219,253
Pinegrove	67,457	58,926	8,531
	1,650,831	1,295,928	354,903
Lehigh	643,973	522,989	120,984
Lackawana	388,203	320,000	68,203
Wilkesbarre	284,398	192,503	91,895
Shamokin	14,904	12,572	2,332
	2,982,309	2,343,992	
	2,343,992		
Increase in '47	638,317 tons.		

Of the quantity sent to market Schuylkill county

furnished	tons.	1,650,831
All other regions	"	1,331,275
Excess in favor of Schuylkill co.—tons		319,536

It will be observed that the increase for Scuylkill county in 1847, was 354,903 tons, and the increase from all the other regions was only 283,211.

Of the whole quantity sent to market since the commencement of the trade, Schuylkill county has

furnished	tons.	10,213,120
All other regions	"	8,580,480
		18,793,603

There are few people, even those who recollect the commencement and progress of the coal business, who have a correct idea of the amount of business of Schuylkill county. They not only *mine coal*, but they also build machinery for mining coal, and for other purposes.

The following statement, from the "*Miners' Jour-*

nal," will give some idea of the amount of machinery manufactured, and used in the county. It will hardly be credited that there are as many—*save one*—steam engines in operation in this one county, which, only a few years since was a wilderness, as in the entire territory of France, with its 34,000,000 of population!

It appears that 79 engines, of 2212 horse power, were manufactured in the county during the past year; this, however, is not a fair criterion to judge of the amount of machinery, manufactured in the same shops, as it sometimes occurs that an engine costing $10,000 or $12,000, requires machinery, in addition, costing $15,000 to $50,000; and in one instance, we believe, the machinery ordered from Messrs. Haywood and Snyder, by one concern in Boston—yes, in *Boston*, as it appears the Bostonians come to *Pottsville* for engines and machinery, for *rolling* mills—cost over $60,000, while the engine cost less than $15,000.

But we give the facts as we find them, as follows:

"Progress of Steam Power in the Coal Business.

The whole number of steam engines engaged in the coal trade, in this region, is as follows:—

	Engines.	Horse Power.
Engaged in the trade, 1845,	68	2018
Added in.....1846,	38	903
	106	2921
Added in.....1847,	61	1544
	167	4465

Making the whole number of engines engaged in pumping, hoisting and breaking coal in the Schuylkill county coal region, 167—with an aggregate power of 4465 horses. As a portion of these engines are run day and night, a horse power may be estimated equal to the power of 10 men, consequently they perform the labor of *forty-four thousand six hundred and fifty men.*

"All the engines added in 1847 were built in Schuylkill county. Our machinists, also, built during the year, 18 engines for other purposes than mining, with an aggregate power of 688 horses.—Eight of these are used in Schuylkill county, for various purposes—the others were sent to Boston, Reading, Harrisburg, Columbia, and Carbon counties, Sunbury, Mexico, etc., etc.—making 79 steam engines, of the power of 2212 horses, turned out in Schuylkill county, in the year 1847. We question whether any other county or city in the United States turned out an equal number of engines within the same period.

"By a recent official report, it appears that in France, which numbers a population of upwards of 34,000,000 inhabitants, there were, in 1845, only 207 steam engines in operation in that country—there are in Schuylkill county alone, 206 steam engines erected at the present time, all of which are running, except three or four.

"The engines built and sold during the last year were turned out at the following establishments:

	No.	H. Power.
Haywood and Snyder, Pottsville,	18	653
E. W. McGinnis, "	12	480
J. L. Pott, "	4	75
W. DeHaven, Minersville,	20	540
S. Sillyman and Co., Port Carbon,	6	120
T. Wintersteen, "	6	139
Hudson, Smith & Taylor, Tamaqua	8	140
Umholtz & Co., Tremont,	4	50
Hawks, Sykes & Vancleve, St Clair	1	15
	79	2212

"There are about 12 engines (several of the largest class) completed in the different establishments, some of which have been sold and not taken away—the others remain unsold. The number built in the county last year was 50—increase in 1847, 29.

"The engines turned out at these establishments will compare with any manufactured in the United States, and in point of strength and durability they are not equalled. When we take into consideration the fact that during the last year 61 engines for colliery purposes, more than one half of the whole number employed at the commencement of the year, were added, we can form a tolerably correct idea of the rapidity with which the use of steam power is increasing in our region. Should the coal trade continue to increase as it has for a few years back, we may venture the prediction that the period is not far distant when Schuylkill county will be noted not only for manufacturing, but for employing a greater number of steam engines than any other county in the Union."

Few people, indeed, who have not visited the coal region, have any idea of the labor of mining coal. Many people have an idea that the coal lays in the mountain, and that it is brought out upon a level, or descending grade, whereas the facts are that it is found in large masses in most instances in veins of a few feet in thickness, standing at an angle of about 45 degrees, and is brought up from *one* hundred to *five* hundred feet, and sometimes from *six* to *eight* hundred feet, and from far below the beds of the streams, as will be seen by the following extracts from the same Journal. It says that, "as the expenses of mining increases, the number of operators are gradually diminishing. This is apparent from the fact that although the number ot collieries have increased during the last year, the number of operators in the region have diminished down to about 100. Three years ago they numbered about 140. Some of the larger operators work five and six collieries.

The collieries are located as follows:

	Above Water level.	Below. Water level.
West Branch	28	14
Mount Carbon	7	15
Mill Creek	11	6
Schuylkill Valley	33	7
Little Schuylkill	11	
Swatara	11	
	101	42
	42	
	143	

Total collieries worked in 1847, 143, of which 42 are below the water level. There are probably about 15 additional collieries preparing for next year's business, 7 of which are below the water level. Some of the old ones are worked out above the water level, and are standing idle.

The following list shows the names of the principal "operators," as those who work the mines are termed, in the region. The Journal says "We append below a list of all the operators in this region who have mined and sent to market over 6000 tons of coal in 1847, except three or four on the Mount Carbon railroad, a statement of which the collector informs us he is authorized by the company not to furnish.

	Tons.
Milnes, Haywood & Co	98,907
M. G. & P. Heilner	92,769
James C. Oliver	88,017
Rodgers, Sinnickson & Co	84,688
William Payne	64,273
S. Sillyman & C. Sillyman & Co	54,435
Gideon Bast	54,345
George H. Potts	46,766
Joseph G. Lawton	46,573
Thos. Petherick	44,414
Robert Adams & Co	40,155
George Spencer & Co	38,131
John Pinkerton	37,112
Charles Miller	36,341
Charles M. Hill	36,091
W. & T. Johns	29,523
E. W. McGinnis	26,908
Jacob Serrill	24,856
Alfred Lawton	22,496
T. & W. Pollock	17,073
J. Cockhill	16,584
Sillyman & Fister	16,423
Thomas T. Ash	15,927
Haven's mine, Mill Creek	15,006
Joseph F. Taylor	14,898
A. Heebner & Sons	13,374
Caleb Parker	13,052
R. Hedscher	12,343
R. Kear	11,287
James Penman	11,286
Thomas Williams	9,173
John Spencer	8,980
J. Wasley	8,908
Jones & Evans	8,903
Colehan & Hannan	8,868
James Berry	7,980
A. A. Clarkson	7,951
H. Guiterman & Co	6,846

There were only 100 operators engaged in mining coal in the whole Schuylkill region during 1847. Of this number 17 mined upwards of 30,000 tons of coal—23 mined upwards of 20,000 tons—and 38 upwards of 10,000 tons.

17 sent about	tons.	1,036,000
6 between 20 and 30,000 tons sent		156,000
23 operators sent		1,192,000
77 sent the balance about		458,000

Having given the foregoing facts, in relation to the coal trade, which show an increase for the past year truly astonishing, and preparation for a much larger business hereafter, which we are quite sure will be required for the increasing consumption, we again take the liberty to recommend to, and urge upon the *railroad* and *canal* companies—by which, and *which alone*, it can be transported to market—the establishment of rates of transportation and toll, which will ensure to the capital invested in those works, a fair and liberal return. Whatever may have been, heretofore, the difference of opinion in relation to the relative ability of the two kinds of improvement, for carrying coal, it is now well established that neither work can expect to carry all the coal, and therefore it is now the proper time to fix upon a system of tolls which will give a fair return upon the enormous amount of capital invested in these works; which have heretofore been used for the exclusive benefit of the *consumers* of *fuel*, rather than for the benefit of those who have constructed the works. It is a question for them, and them alone, to settle.

The following statement shows the details of the Lehigh operations, and an increase of business that indicates coming prosperity; a result which that region is richly deserving of, as they were the first to furnish a *prejudiced* community with the anthracite coal, and of course to receive the anathemas, both loud and oft repeated, of those who attempted to make fires with it.

Of one thing we are quite sure, and that is that the increasing demand for coal will ensure them ample returns, at no distant day.

LEHIGH COAL TRADE.

The following is a comparison of the trade in the following years sent from the different sections of this region:

	1847.	1846.
Lehigh Summit mines,	201,951	165,011
Do. Room Run	182,978	109,652
Beaver Meadow Co.,	109,363	85,948
Summit Co.,	32,820	11,868
Hazleton Co.,	105,766	98,541
Buck Mountain Co.,	50,847	46,104
Wyoming,	10,246	5,866
	643,972	522,989
	522,989	
Increase in 1847,	120,983	

Mixed Gauge, Cheltenham.

Herapath says "a gentleman intimately acquainted with the railway system writes:—What a farce is the opening of the double gauge to Cheltenham! The line is only about *six miles long*. It has no sidings or intermediate stations! When it reaches the town, there are *two stations*,—one for the broad

gauge and one for the narrow! If the mixed gauge requires separate stations, it must be allowed by all to be a failure; because, at this moment, all the companies are spending large sums to make joint stations in the towns where lines meet, in order to save expense of working, and afford a convenience to the public."

The farce of the mixed gauges on the 7 miles between these towns is strictly Brunellian. Why had not the little man laid the broad gauge down by the side of the narrow, and called that a mixed gauge? It would have been quite as much of a mixture as it is to lay a third rail where there are no crossings and sidings, and where the stations for the two gauges are separate. We advise Mr. Brunel to leave off these clap-traps and "little-goes." Before men of sense and experience they can produce but one feeling, and that not a favorable one. Let us see 40 or 50 miles of mixed gauges laid down, with 10 or 12 stations, half a dozen sidings and crossings, and two or three branches entering and leaving the line, and that we admit will be a fair trial.

Dock Property.--Port Grimsby.

We find the following statement in Herapath in relation to the value of dock property on the Humber. This may indicate the prospective value of the Atlantic dock property at New York.

A return has been made by the collector of customs at Grimsby, showing an increase, such as probably has never been equalled in the Kingdom, and which justifies the most sanguine anticipations of the shareholders of the Manchester, Sheffield, and Lincolnshire company. The dock at Grimsby is now quite full of vessels, and there are 40 outside waiting for their turn to enter. As an intimation of the value of dock property on the Humber, it may be stated that the Hull dock shares, of £500, are now £1,900 each. The following is a comparative account of the revenue collected in the port of Grimsby in the year 1843, 1844, 1845, 1846, and to the 10th October, 1847:—

1843	£4,046	3	4
1844	6,191	17	11
1845	11,209	13	9
1846	32,736	3	0
1847, to October 10th	52,120	6	11
Increase on 1843	£48,074	3	7

This enormous increase affords a happy presage of the business likely to be done there when the docks shall be completed and the railway opened.—"Sheffield and Rotherham Independent."

Wrought Iron Tubular Bridge.

A correspondent of Herapath's Journal says that "The tube for a single line of railway over the Conway is now on the eve of completion, and the chains and presses, for raising it to its seat on the piers, will be sent off from London next week, by the London and North-Western railway, to the Birkenhead docks, thence to be shipped to Conway. The hydraulic presses, pumps, and engines for working them, have been prepared by Easton and Amos, of the Grove, Southwark, and we yesterday saw them in full working action. Mr. Stephenson returned to town on Thursday; and there is no doubt that, by the end of the month, we shall be able to record that the tube is spanning the Conway.

We believe, that at the latter part of this week, or the beginning of the next, the tube will be tested, which will be completed by the time the raising apparatus reaches Conway.

The pumps are placed on the same axis as the steam cylinder, which, being in a horizontal position, and with one pump at each end of the cylinder, having a double piston rod, to work both pumps simultaneously, produces one regular stream into the hydraulic presses. The stroke of the cylinder is 16 inches; the pump bore 1¼ inch; the number of strokes per minute will be about 45, so that the tube may be expected to be raised, (allowing for the delays of shifting the chain, etc.,) about 2 feet per minute."

Air Engines for Railroads and Common Roads.

Mr. Evan J. Purser, of Philadelphia, proposes to construct an engine to be propelled by heated air so as to combine a greater amount of power with more speed, having less weight, and therefore less resistance than the common engines, and which, as he says, can be applied successfully to railroads and common highways. He would like to have assistance in the construction of his engine, as he is but a working mechanic. Here is an opportunity for some of the Inventors' Institutes to do a good turn and exhibit a true philanthropic spirit. Let any of the secretaries of said associations direct a communication to Mr. Purser, No. 184 Chesnut street, Philadelphia, and they will obtain all the desired information.—*Scientific American.*

Mixed Gauge.

The Buffalo Commercial Advertiser, which we do not receive, says, "by the courtesy of Mr. Wallace, who has been long and favorably known as the courteous and indefatigable superintendent of the Buffalo and Attica railroad, we have seen a beautiful model of a recent invention by himself—a method to obviate the inconveniences arising from the different widths of the railroads to meet at Attica, and consequently of the carriages which it is requisite should run over this road. The width of the N. Y. and Erie railroad is 6 feet. The Attica and Hornellsville track will be of the same width. That of the Buffalo and Attica track is only 4 feet 8½in. How, without the troublesome and expensive removal of freight from one car to another, can its transportation to Buffalo from either of the two first mentioned routes be accomplished? The invention of Mr. Wallace consists merely in having an inner and an outer line of rails, adapted for carriages o each size, so that on the same road cars of various sizes may travel in the same train—or cars of the greater width be drawn by an engine of the narrower size—or the reverses."

We shall be obliged to Mr. Wallace for a drawing and description of his plan for accomplishing this object.—[Ed. R. R. J.]

Extraordinary Railway Travelling.

In the course of a discussion, a few days since, between two gentlemen connected with the railway world—one an advocate of the narrow, and the other of the broad gauge—the gentleman in favor of the latter asserted that he could travel upwards of 700 miles in 24 consecutive hours, by the ordinary trains of the Great Western company. This was disputed; a wager was the result, and the following are the particulars of the performances by the gentlemen who undertook to decide the wager:—He left Exeter by the 12 o'clock A. M. express train, which started 2 minutes after its time, and arrived at Paddington 31 min. after 4 P. M; he next left Paddington by the 5 30 P. M. express, and reached Swindon at 5 min. past 7. At 7 40 P. M. he left Swindon, by the 3 15 up train from Exeter, and arrived at Maidenhead at 9 26. At this station he waited for the 8 55 down night mail from London, by which he again started for Exeter at 9 h. 4 min., where he arrived at 7 min. past 4 on the following morning. At 38 min. past 6 he left Exeter by the morning express, and reached Paddington at 58 m. past 10 A. M. He then crossed to the down station, and was just in time for the 11 o'clock train to Maidenhead, which place he reached at 1 min. past 12. The distances thus performed are as follows—

	Miles.
From Exeter to Paddington	193¼
" Paddington to Swindon	77
" Swindon to Maidenhead	55
" Maidenhead to Exeter	171
" Exeter to London	193¼
" London to Maidenhead	22¼
Making a total of	713

miles travelled in one minute within the 24 hours.—*Railway Record.*

Improved Mode of Burning Anthracite Coal in Locomotives.

The following partial description of an improved fire-box for burning anthracite coal in locomotive engines, is from the North American and U. S. Gazette. If Mr. Henniss has accomplished an object so desirable, he has done the railroad interest good service, and deserves ample returns, and we shall be pleased to hear from him in relation to it.

"We have inspected," says the writer, in the North American, "the model of an improvement of the fire box of the locomotive engine, by which the desired end of burning anthracite coal, with as much or greater facility than in a stove, is, to all appearance, fully attained. An endless grate passes over rollers at each end of the fire box, and ratchet wheels affixed to them, enable the fireman to make the grate revolve at will, either way. By a simple arrangement of a lever, one end of the grate may be raised or depressed, so as to give greater space and facility for throwing the clinker out upon the track. The adjustment of the parts is very simple, and they cannot be thrown out of proper working order.

The great difficulty hitherto experienced in burning coal in locomotives, is that the great draft ignites the coal too rapidly, and melts into a mass of clinker on the grate, by which all the draft is soon excluded. The intense heat is expended on the sides of the fire box, and causes its speedy destruction. By this invention the coal may be distributed at will and freed from clinker, while by the forward movement of the grate it has a tendency to throw the body of the coal in a triangular form, and permit the fresh coal at the top to find its way down toward the grate. The grate bars, too, may be kept comparatively cool by the change of surface their rotary motion permits.

The inventor, Mr. William G. Henniss, of Pottsville, has submitted the model to several scientific gentlemen, and others connected with the practical operations of locomotives, and it has received their commendations and approval. The increasing scarcity of wood is proving the necessity, for some means by which coal can be burned in locomotives more imperious, and we hope that in Mr. Henniss' invention that means has been found."

New Steam Gauge.

Mr. George Stephenson addressed the following letter, dated October 15, 1847, to the London Daily News.

"Sir,—A most important invention has been submitted to me for my approval, patented by a Mr. Smith, of Nottingham, and is intended to indicate the strength of steam in steam engine boilers. It is particularly adapted for steamboats, and can be placed in the cabin, on deck, or on any other part of the vessel, where it may be seen by every passenger on board. It may also be fixed in the office of every manufactory where a steam engine is used, at a considerable distance from the boiler. I am so much pleased with it that I have put one up at one of my own collieries; it is some distance from the boiler, and in another house, and works most beautifully, showing the rise and fall of the steam in the most delicate manner. The indicator is like the face of a clock, with a pointer, making one revolution in measuring from 1 lb. to 100 lbs. upon the square inch of the pressure of steam; it is quite from under the control of the engineer, or any other

person, so that its indications may be relied upon, and the construction is so simple that it is scarcely possible for it to get out of order. I might give a full explanation of the machine, but I think it best to leave that to the inventor himself. The numerous and appalling accidents which have occurred from the bursting of steamboat boilers, have induced me to give you these observations, which I think desirable to be laid before the public. I may state that I have no pecuniary interest in the scheme; but being the first person to whom it has been shown, and the first to make use of it, I feel it a duty that I owe to the inventor, as well as the public, to make it as universally known as possible. The indicator is put up at Tapton colliery, near Chesterfield, and may be seen any day, by any respectable person, by inquiring either for Mr. Hindmarsh or Mr. Langlands.

"GEORGE STEPHENSON.

"Tapton House, Chesterfield, Oct. 15, 1847."

Railroad Items.

Pittsburg and Connellsville Railroad Co.—This company has issued proposals for the graduation and masonary on four miles of their road, extending up the Youghiogeny river, from the villiage of M'Keesport in the county of Alleghany.

The Legislature of Virginia has passed a bill authorizing the city of Richmond to subscribe 200,000 dollars to the stock of the Richmond and Danville Railroad Company.

The subscriptions to the Hudson River railroad are coming in faster than the funds can be disposed of in the construction of the work, and the directors have adopted a resolution giving subscribers leave to retain in their hands, for some months, the fifth and sixth instalments.

The air-line railway (New York and Boston) project has secured a subscription to an amount more than sufficient for the construction of the work. The excess of subscription is stated at 500,000 dollars.

Long Freight Train.—The new engine. North Carolina, came in from the West, on Thursday evening, with a train of one hundred and eighteen cars.—*Springfield (Mass.) Gazette.*

Iron Vessels--The Josephine, of Liverpool.

The following description of the "Josephine, of Liverpool," an iron vessel built for the Mexican trade, or to cross the bars of the Mexican ports, may be interesting to some of our readers, and therefore we give it a place.

An account of the Iron Barque Josephine, of Liverpool. By Capt. Masters, who commanded her in the voyages she has made.

The subject of iron vessels is one of great importance, and the use of that material in naval architecture has been steadily progressing since it was introduced for sea-going vessels by Mr. Manby, in the steamer named after him in 1821, and which was the only vessel that ever conveyed a cargoe direct between London and Paris, without transhipment.—Sanguine hopes had been entertained of introducing iron for vessels of war; but it appears from the partial accounts that have been made public of the results of the experiments at Woolwich and elsewhere, that the effects of cannon shot upon iron vessels are more destructive than upon timber. The paper read was a plain and somewhat dry specification of the construction of the vessel, which will, however, when printed *in extenso* in the minutes of proceedings, be extremely useful.—The main dimensions of the barque Josephine are—length, over all. 99 feet 3 inches; extreme breadth, 24 feet 6 inches; depth of hold 9 feet 9 inches; register tonnage 168 tons; by old measurement 221 tons. She was of a build, differing from almost any other merchant ship, being intended tor service in the Mexican trade, and calculated to cross the bar of Tampico, and other impediments. She was entirely of iron, even to the bulwarks; and as she lay low in the water, drawing 9 feet aft, and 8 feet 8 inches forward, her ports were hung on hinges forward, so that they should act as valves, and allow the water to escape from the deck, and yet shut of themselves when she heeled over deep on her side. Her general rate of sailing was from 11 1-2 to 12 knots per hour; she was very buoyant and very dry, rising well to the sea. There was great capacity for stowing the cargoe, owing to the absence of large projecting timbers. She was somewhat damp forward and aft, but very dry in the main hold. There was not found to be any difference in the health of the crew from that of wooden vessels; she was a little cooler than other ships owing to her being so deep in the water, and the thin material did not retain the heat like wood. Iron ships have generally been found to get very foul; the Josephine was, however, paid with various compositions as an experiment. That which succeeded best was—1 barrel of varnish, 2¾ cwts. of best tallow, 40 lbs. black lead, 7 lbs. brimstone, and 70 lbs. arsenic. This being applied hot, the iron having been previously warmed and paid with boiled linseed oil, appeared to have prevented foulness, as after her voyages there was little weed or grass, and scarcely any barnacles; but very slight oxidation took place, and that only where the composition had been rubbed off. They were as much annoyed by rats as in a timber ship, nor could they be destroyed by any of the means adopted. The principal feature of the paper was that which treated of the local attraction of the compass, which can scarcely be given in an abridged form. It appeared that as long as the ship was on an even keel, and perfectly upright, the compass acted correctly, but in proportion to the listing over, so was the derangement of the magnet, the local attraction being changed by the side frames and deck beams falling into new positions.—This caused great variation in the ship's course, and it led to conjecture whether this may not have been the cause of the loss of the Great Britain—as if her compasses were acted upon as much as those of the Josephine, a deviation of 6 1-2 miles from her course might easily have occurred. Capt. Masters suggested the hanging the binnacles complete in gimbles like the compass, in order to their always remaining vertical, and also in adjusting the compasses, that they should be tried in every position, a table of variations being made out for every degree of listing over.—The paper was illustrated by drawings of the vessel and of her rigging, which possessed peculiarities, and also by several tables for the correction of the compasses.—*Min. Jour.*

Foreign Patent Laws.

We find, in the Scientific American, the following in relation to Foreign Patent Laws. Those which afford the highest security for inventors seem to be those of Great Britain, France, Spain, the Roman States, and Bavaria.

While the legislation of most countries, in respect to this subject, might be materially improved, it is to be lamented that in some countries, for instance in Portugal and Belgium, the laws, such as they are, have been in some points disregarded by the authorities themselves, and applicants for patents have been subjected to arbitrary conditions.

A brief survey of the Patent Laws of Europe may be of advantage to some readers of the Railroad Journal.

Great Britain.—The British Government grants patents both of importation and invention for not more than 14 years.

A patent granted in England comprising the principality of Wales and the town of Berwick, costs £110 sterling, or about $528.

A patent for Scotland alone costs £80 sterling, or about $380.

A patent for Ireland alone costs £138 sterling, or about $662 40.

A patent for England and Scotland costs about £190 sterling, or about $912.

A patent for England, Scotland and Ireland costs £218 sterling, or about $1046 40—and even these enormous sums do not include the amounts charged in addition for the Colonies.

With respect to the fees of English Patent Agents, they range from £10 to £20 sterling.

By the Act of 7 and 8 Victoria, the term of the patent may be extended for a period not exceeding 14 years.

Patents of addition for improvements are granted.

France.—The French Patent Law is clear and liberal. Patents are issued in France, either to citizens or to foreigners, for all industrial inventions, except pharmaceutical compounds or remedies, which are subject to special laws—and also except plans and combinations of credit and finance. No discovery is deemed patentable, if made public before application so as to enable any one to execute it.

The charges for patents are:—for a term of 5 years 500 francs, or about $93 70.

For a term of 10 years 1000 francs, or about $187 40; and for a term of 15 years 1500 francs, or about $281 10.

These charges are to be paid in annual instalments of 100 francs, or about $18 74.

Neglect in making a payment causes a forfeiture of the patent.

No other person besides the original patentee can obtain a patent of addition, within a year from the date of the patent,—but any one in possession of an improvement, may deposit a demand for such a patent, which will remain sealed until the expiration of such 12 months, when it may be granted provided the original patentee has not in the meantime demanded a patent for a similar improvement.

The subject patented must be put in practical operation within two years from the date of the grant.

The term of a patent's duration cannot be prolonged without an express legislative act.

If a foreign patentee obtains a patent in France, the French patent will expire with the foreign patent.

Austria.—In this country patents of invention are granted to applicants whether natives or aliens, for terms of from 1 to 15 years, at the option of the petitioner. The petitioner may procure a patent for 1 to 15 years, at the option of the petitioner. The petitioner may procure a patent for one year and prolong it as he may think proper, within the limits allowed.

Patents are not granted for the preparation of food or medicine.

Patents by the act of January, 1840, are granted for and at the following prices and rates respectively:—For 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 years—at 25, 35, 45, 55, 65, 80, 100, 125, 155, 190, 230, 275, 325, 380, 440 florins of Austria, which are about the value of 47 cents each, and those payments must be made in full at the time of soliciting the patents, according to a recent alteration, and there is a further annual tax to be paid on account thereof ranging from $3.56 to $4.80.

A patent of addition, as such, cannot be granted. An improvement can only be protected by a new patent.

A patent right must be exercised within the first year of its acquisition, and not neglected during a year. Foreign patentees, or their assignees, may procure patents in Austria, for not more, indirectly, than 15 years, and determinable with the foreign patent.

Prussia.—Prussian patents, both of invention and importation, are granted *nominally* only to resident of that kingdom, and, if transferred, the assignees must also be residents.

The government usually fixes the period for which patents shall run. They are usually granted for 8. years. For such patents the charge is about $4,86.

The subject of the patent must be new and never have been divulged in any printed work.

In consequence of the cheapness of patents in this country, patents of addition for improvements are not demanded, but new patents for this purpose are taken out.

The government fixes the term within which the patent must be set in operation, which term is usually 5 months after its issue.

Belgium.—In this kingdom a patent, either of invention or importation, may be granted for 5, 10 or 15 years, at the option of the petitioner.

If a patent of importation be granted, it expires with the original patent procured in the country from which the importation is made. So that if an American patent has 10 years unexpired, the Belgian patent of importation should be taken out for 10, not for 15 years.

This government rarely extends the life of patents beyond the period first fixed.

The subject of the patent must be new, and never published in printed work.

The charges for Belgian patents are:—For a 5 years patent about £13 or $62 40; for 10 years, about £26 or $124 80; for 15 years, about £52 or $248 60. Of this sum £1 or £2 is required to be paid on dilivery of patent, and the balance in 2 years. In default of payment the invention is declared to be public property.

Patents of addition are issued gratuitously, but with the same formalities as those prescribed in case of the original patent.

Belgian patents must be put in activity withiu two years from the time of their issue, although this term is sometimes extended.

Belgian patents may be granted either to natives or to foreigners, and for almost any invention, although the government has in some cases refused to grant patents for improvements connected with railroads, probably supposing that they would be able eventually to procure the benefit of such improvements without paying for them.

A Belgian patent is, by a most illiberal provision, forfeited by taking out a patent in the same name in another country.

Holland.—The patent laws of Holland are identical with those of Belgium, although in some respects differently construed by the governments of those countries respectively.

Russia.—The Russian government grants patents of invention and also of importation, both to citizens and aliens.

The actual charges for patents of invention are:—For 3 years, 300 roubles or about $75; for 5 years, 500 roubles or about $125; for 10 years, 1500 roubles or about $375. And patents of invention are not granted for a longer period than 10 years.

The charges for patents of importation are: For 4 years, 800 roubles or about $200; for 5 years, 1000 roubles or about $250; for 6 years 1200 roubles or about $300. Patents of importation are not granted for a longer period than 5 years.—[Euling's Foreign Patent Laws of 1845.

No patent of addition will be granted in this country, so that if an improvement be made, a new patent must be granted.

The term prescribed by the Russian government for setting the object of a patent in operation in six months.

Railways and the Money Pressure in England.

It may be interesting to some of our readers to know what is said by eminent men, in the British Parliament, in relation to the influences of Railway operations, upon the money market, and the business of the country, during the past few years; we therefore give the remarks of Lord George Bentinck, in the House of Commons, on the evening of 24th November last, and of the Chancellor of the Exchequer, on a subsequent evening.

These gentlemen look at the subject from different directions—one from the *east* and the other from the *west*—and, almost, of course, their conclusions differ; but, as disinterested parties may find interesting and useful facts on both sides, we give both speeches, as we find them in the London Railway Record, of November 27th, merely omitting the oft repeated "Hear, hear."

In the course of the debate on the address, in the House of Commons, on Wednesday, Lord George Bentinck thus adverted to the connection of railways with the money pressure:—

The honorable gentlemen who moved the address attributed all the distress, or the greater portion of it, to the enormous sums that had been expended in railways; he laid all the distress in the money market to the charge of the railways. This is a very convenient argument. I am not surprised to hear a free trade Government, and the political economists, join in a cry that it is "all the railways" that have brought on these difficulties. That there are difficulties nobody disputes; so gloomy a speech never was made by any sovereign to her people as that which we are considering now. But when the honorable gentleman says that £161,000,000 have been spent on railways, and asks whether it is possible that any country should bear such a drain as that, he forgot to tell us that that expenditure had taken place in the course of 20 years. There was laid upon the table of this House, at the latter end of the last session, a return showing that the sum total that had been spent up to January 1, 1847, on railway works and railway stock (exclusive, of course, of land, but it must be clear to every gentleman that any money paid for land is merely transferred from one to another, and cannot be counted in the drain of the country), amounted in round numbers to £82,000,000 sterling, and that £32,000,000 of this had been expended prior to the year 1841, leaving but £50,000,000 expended in the six years, 1841 to 1846, both inclusive. The honorable gentleman states—I do not know where he gets his authority—that the sum that has been expended now amounts to £161,000,000. I believe that the sums called up in the present year amount to £33,000.000, but £6,000,000, or £7,000,000 of that are in arrear; and the result is that in the present year about £26,000,000, with, perhaps, £7,000,000 more, making altogether £33,000.000, have to be added to the £50,000,000, and you have at the outside £85 000,000 sterling spent in the period between 1840 and the present time. That is little more than £12,500,000 a year. Then are we to be told that this country, after 32 years of peace, is reduced to that state of poverty and distress that it cannot spend at the rate of £12,500,000 without being brought to the verge of ruin? The honorable gentleman appealed to this statement of the sum thus expended; has he forgot what we expended in the period of the war? We are told there was a great famine; that is true, and large are the sums that have gone out of the country in payment for imported provisions; but is it not the system of free imports that has drawn the gold out of the country, and brought on this distress? It is not the high price of corn; the price of corn in the last seven years of the war, averaged, I think, 94s. 6d., and yet we were enabled to raise and spend every year, £70,000,000 sterling, and more, upon an average, in taxes alone, whilst in loans, we raised and spent in those same seven years.

I think, above £180,000,000, that is £26,000,000 a year more. And yet, were we poverty-stricken then? Was England then a spectacle of bankruptcy and shame? Was England crying out that she was ruined, and could do no more? In the last year of the war—in 1815—we were able to raise a property tax £15,000,000; we were enabled to send 207,000 regulars and 80,000 militia into the field; we were able to pay 140,000 seamen and marines; and now are we to be told that we cannot pay 303,000 railway laborers, without bringing the country to the verge of ruin? It is well for the Government to raise this cry against the railways; it is well that these free-traders who promise so much should have some scape-goat on which to visit all their sins. But how is it that we look around us and see in the United States of America, in Belgium, in France, in Prussia, in Bavaria, and in Russia, railway operations (so far as the Continent is concerned) not inferior to these, and the same dearth prevailing, and yet these countries are not bankrupt. We have got within these few days the speech of King Leopold, of Belgium, and he congratulates his country that the famine being over, Belgium has got through her financial crisis far more successfully than neighboring counrries. We have the speech of the King of Holland to their High Mightinesses the States General; he, too, congratulates them upon the favorable state of their finances, and the prosperity that is showing itself again. Three months ago, when the harvest was yet scarcely completed, we had the speech of the Minister of Finance at Paris (M. Dumon), who congratulated the country upon the fine harvest, as we have thanked Providence for the fine harvest here; he was at that time asking the sanction of the French Chamber for a loan of £10,000,000 sterling; he entered into the discussion of what would be needed from the government for the French railways; he stated the sum altogether at £64,000,000, and he stated the large sums that had already been spent; but did he speak of poverty and bankruptcy?—Did he speak of a falling revenue, and of manufactures and laborers out of employment? No; he congratulated the country that every year, from 1833 onwards to 1840, the revenue of France had been annually increasing by something like £400,000; but since the State had assisted private industry, by these large advances upon railways, in the last seven years, the revenue of France had been annually increasing by the amount of 23,000,000 f., which is about £953,000 a year; and he congratulated the Chamber, that the momentary depression which had existed in the year 1846, on account of the famine, was already passed away, and the revenue of France was again upon the ascendant. I am reminded of the state of the French funds. See what is the difference:—the French three per cents., which used to stand about 13 per cent. below the English, are creeping up to the English funds, and now stand but 9 per cent. below our three per cent. Consols. Look at Prussia, and you see the same thing—an annually increasing revenue, her population in the last 30 years since the war increased by one half, her debt reduced almost to nothing, the country, every year, able to pay off a large portion of her debt, and her exports annually increasing.—Look at the other states—look at Bavaria, and you find the same thing. Bavaria is remarkable for its encouragement of railways and other measures; and I think the exports in the last ten yesrs have more than doubled; her trade has increased in the proportion of 9 to 4; she is annually able to pay off a large portion of her debt, her revenues enormously exceeding the amount of her annual expenditure. Of Russia, it may be said, that the famine did not extend to that empire; but what do we see in the case of the Emperor of Russia—him of whom we used to hear that he was so poor that it was impossible he should ever go to war? Why, we are looking with anxious impatience to the determination of his Imperial Majesty, glad to receive a contribution of some £5,000,000 to the funds of Western Europe; and yet we read the other day that his Majesty, instead of finding his coffers much denuded, has discovered since the spring that no less than £3,500,000 of gold has flowed into his coffers. How is it, that the same causes have not had the same effects on continental Europe, that we are told they had on England? What is the difference between this country and foreign countries? Why, there are two great differences. Not one of these continental powers has abandoned the old national principle of protection of their own industry—not one of these countries has consented to be so easily parted from its privileges and advantages—not one has consented to reduce the import duties upon the goods of foreigners, without asking some equivalent in return. They are prosperous; their mills are not standing still, their artizans are not thrown out of employ, their industrious populatiou are not cast for subsistence upon the poor rate. They, on the contrary, are carrying on their manufactures to the exclusion of England; and, at this very moment, their manufacturers are purchasing the cotton of England—purchasing in Liverpool more cotton than at any preceding period, and purchasing it at a loss to the British merchant—purchasing it at 1½d per pound below the price at which it is selling in any other country, where it is either consumed or produced—at 1½d. per pound below the price at which it can be purchased in Charleston or New Orleans, and imported to Liverpool. In the last six weeks, I know, the merchants of Liverpool have exported 22,000 bales of cotton, at a loss of £88,000, and, in the preceding periods of the year, they exported cotton at a further loss of £100,000, to be a premium, a bonus, a bounty to the foreign manufacturer to come here and beat Englishmen in their own market. Is this because we have more cotton than we know what to do with in this country? Far from it. For eight For eight years past the stock of cotton never was so low in Liverpool as the present time. It is acknowledged on all hands. The gen men on my right know it. In has been acknowledged that a short cotton crop is one of the causes of the great prevailing distress. Your manufacturers cannot carry on their trade because the price of cotton is so high, and cotton so scarce. They are as much starved for want of cotton as they have been starved for want of corn. Yet what, after all, is the spectacle which England now presents?—Why, that of an exporting country of cotton, the raw material of her own staple manufacture. It it, then, a want of cotton that produces all this distress? No; it is the want of credit. It is your restrictive monetary laws. It is your cruel Bank Charter Act—an act passed, by anticipation, as we are now led to suppose, by the Elbing letter, with a view to correct any too great spirit of commercial speculation—an act that is to make things in England artificially cheap, at a time when your foreign imports are taking all the gold out of the country, and foreigners will not take your manufautures in return—an act wnich, after the gold has been drained from you, is to bring back gold to England by making everything in England artificially cheap.

Mineral Resources of the United States.

We have often had occasion to speak of the mineral resources of this country. We have had but one opinion, in years, in relation to this important subject, and the proofs of the number, extent, variety, and richness of our mines are constantly accumulating. Our mines of coal, iron, copper, lead, silver, and gold, will prove, when properly developed, equal, and probably superior in extent and richness to those of any other country on the globe.

The following interesting description of a visit by an intelligent gentleman, to the mineral region of North Carolina, will give an idea of the untold riches of that region. It is from the Greensboro, N. C. Patriot, but we find it in the American Mining Journal, published in New York.

Mines and Mineral Resources of North Carolina.—A friend in North Carolina has sent us a copy of the Greensboro' Patriot, containing a long communication over the signature of "Beaumont," upon the mineral resources of Western North Carolina, from which we make the extract which follows:

I visited the Washington lead mine, near Lexington, in Davidson county. This mine was accidentally discovered by picking up some specimens of lead and silver in a small creek near by. In company with Mr. Greenfield, the gentlemanly superintendent, (at whose house I was entertained,) I made a visit to the depths below, and was perfectly delighted as I wended my way, candle in hand, through the dark subterranean passages. The great variety of specimens that met the practised eye will more than compensate for the trouble of descending these long ladders (the entire depth of the shaft is 200 feet.) The following specimens of minerals are found here, viz: carbonate of lead, yielding 75 per ct.; sulphate of lead, 70 per ct.; carbonate of lead, with a mixture of copper and silver; phosphate of lead; glass carbonate of lead; white carbonate of lead, needle form; zinc in endless profusion; blue vitriol or sulphate of copper; and sulphate in abundance. I saw here specimens of the

phosphate of lead for the first time, and they are truly beautiful. It is the only mine in America which is yet known to have produced this description of mineral. I have with me several rich specimens, which, if you could see, would give you an idea of the minerals of North Carolina. The lead of this place contains 200 ounces of silver to the ton, and 100 pennyweights of gold. The principle of oxidising the lead, and the facility with which the metals were separated, were to me very interesting, as my previous knowledge was only theoretical. The mine during one year of its existence, with an actual capital of only $50,000, actually cleared twenty-five thousand dollars. This vein is owned by a company from Philadelphia, who are constructing an engine for pulverizing the ore, which will save the horse power previously employed, and facilitate the operations perhaps fourfold.

At the depth of 160 feet there has been found an argentiferous ore, which produced $100 per ton in equal quantities of lead and silver, after deducting the expense of smilting. And also on the same level were found masses of rich blue galena, worth $1000 per ton.—This ore is uncommonly rich.

I have been politely furnished with the following note from the president of the mine, written some time since, in reference to this argentiferous lead.

"Dear Sir—I have delivered 4277 pounds of argentiferous lead from our mine to the refining furnace on Monday last, from which I furnished to the United States mint a 'test bottom' of silver, weighing 850 ounces. The return from the mint this morning gives the value of this silver at 1,053 15 dollars, and of the gold extracted 446 10.

Yours respectfully,

Wm. Blackburn, President.

To Richard C. Taylor, Esq., Phila.

The next mine which I visited is situated in Rowan county, 14 miles from Salisbury, and known as "Gold Hill." This is a very interesting place, not only on account of the gold, but especially so in reference to the population which has been attracted here to procure business, etc. Three years ago this place contained two or three log huts, and now there is a population of 700 souls. This place originally belonged to two or three individuals, but recently purchases have been made by the operatives which have increased the number of proprietors. Those who lease a privilege of mining, pay one-seventh of all they make to the proprietor, equal to 14 per ct. There are eight different mining interests at this place, all doing well. I understood from Mr. Randolph, one of the proprietors, that they averaged 50 per ct. upon their capital, and some had even done better.

Near Salisbury, in the same county, there is one of the best quarries of granite that I have ever seen, I think the quality superior to the New Hampshire or Connecticut. It is of a bluish cast, mingled with dark brown particles, which, when finished off with the chisel, is really beautiful.

When the Danville railroad shall be completed and a connection formed through N. Carolina to Charlotte, the people of Richmond may avail themselves of the benefits of this quarry for constructing various kinds of buildings, etc. Now they depend upon the north for the article, and are largely tributary to her in this respect.

There is a bed of iron ore in Lincoln county, called "Big Ore," which is supposed to be inexhaustible. It is of a fine quality, and easily worked. There is one also in Gaston county, near Lincolnton, called "Yellow Bank." To work these ores there are in Lincoln county three furnaces and three forges—in Catawby county two forges, and in Gaston county three forges, one furnace, and a rolling mill and nail factory. The rolling mill and nail factory has been recently sold for $75,000, and is now rented on a lease of $4,500 per annum. The gray ore which is found in abundance, is said to be the best; it is so easily converted into iron that both the yellow and magnetic ore which are also found in abundance here, are not used. The gray ore can be converted into iron without the use of lime.

Within two miles of Lincolnton there is found a large body of plumbago. I have not made any experiments with it, and cannot tell any thing of its qualities.

Three miles from town there is a fine bed of red chalk of as fine quality as I have ever seen. I think it might be used for lead pencils (red) or perhaps for painting purposes.—If it answers for paint (and I have no doubt but that it will) it will certainly be very valuable. The extent of this vein has not been ascertained.

In company with Mr. H. Cansler, (who resides near Lincolnton) I visited several gold mines contiguous to the town. These mines are of two descriptions, viz: the branch or surface deposit, and the regular gold ore, or vein mine. The branch deposit is easily worked, by a very simple process, i.e., by throwing the gravel containing the metal into a rocker, perforated with holes. This rocker is kept in motion by one person;—meanwhile the water is streaming upon it in a current sufficiently large to give it a thoro' washing. The gold and the particles of gravel, etc., descend through the holes, and the coarse part is washed away. By the use of quicksilver in the bottom of the rockers, the particles of gold become united, and are removed at the close of each day. The regular ore which occurs in the bowels of the earth is very often quite difficult to be obtained. The cost of engines, roper, buckets, etc., together with the immense labor of building up the entire shaft with firm, heavy logs, or green wood, is quite an item of expense, but in most cases has been found to pay well. In our travel over a tract of country of about 2000 acres, about 35 or 40 veins of gold were found, all of which I have not a doubt would pay well to work them. In one place where Mr. Cansler had experimented to about 20 feet deep, ore of the richest quality was found, supposed to contain $20 worth of gold to the bushel of ore. Mr. Johnson and Mr. Cansler found specimens of gold in a branch deposit, near this rich ore, which weighed 338 pennyweights. These were in a solid mass. There are two branch deposits near this place, now being slightly worked; one by Mr. Slade and the other by Mr. Summer. At Mr. Slade's they average one and a half pennyweights per day to the hand, and expect to make 5000 pennyweights in the year with ten hands. Each pennyweight is worth 96 cts.; so you will percive that each negro will yield $480 per annum gross; whereas in planting, they cannot at best average more than $30 gross per hand, and I am told that not one planter in five has done even this much.

There is a large bed of limestone which lies contiguous to this town, and is ascertained to be of a good quality. The white sandstone is also found to be unlimited in extent.

A regular quarry of fine variegated marble, has been found near the limestone. It is susceptible of the highest polish, and will no doubt prove equal to the real Egyptian.

Dr. Burton, of Lincolnton, has recently discovered a vein of lapis lazuli (ultra marine.) It is a beautiful blue color, and may no doubt prove highly valuable, especially should it work well with oil. Prof. Ure, in his dictionary of Arts, etc., p. 1268, says:—"its price in Italy a few years ago was five guineas the ounce." The trouble of preparing it is inconsiderable. A piece of the ore has been forwarded to Dr Draper, editor of Kain's Chemistry, (an English work re-published in New York,) who has analysed it and pronounced it to be of good quality. I believe that this is the first lapis lazuli ever found in America.

A specimen of elastic sandstone was shown me by a gentleman of the bar residing in this place, to whom it had been presented.—This was taken in Yancey county, in this State. It is perfectly plyable, and can be bent similar to a piece of India rubber.

I visited the mines in Gaston county. The one known as "Asbury's," has been operated since last May, and promises well. They have three shafts from 20 to 25 feet deep.—Some of this ore is extremely rich. I saw specimens (some of which I have) which will yield 100 pennyweights per bush. The average yield is over two pennyweights per bushel. The veins are from four to six feet wide, and contain in addition to gold, iron and silver. McCarty's mine is about a mile west of Asbury's. This is extremely rich. In some cases 256 pennyweights of gold have been taken in a day with three hands, by simply washing the finest quality of ore. This same ore, upon the third washing, produced 23 pennyweights to two hands per day and it now remains to be ground and washed the fourth time, and I have no doubt will amply repay the labor. The shaft at this mine is only 56 feet deep. There are two other mines here which can be very profitably worked. The appearance of the ore at these mines is very dissimilar to that found at Gold Hill. It is a pure white quartz rock beautifully transparent, and is studded with small particles of pure gold.

In Montgomery county there is a gold mine which yields a considerable quantity of

gold, but the quality is not so pure as that found in Lincoln county. This ore is of a light and brittle character, easily ground.—They have an engine which operates twelve mills; each mill can grind about 75 bushels of ore per day. It is supposed that this mine will prove exceedingly profitable on account of the great facility with which the gold can be separated from the ore. This is called the "Russell Mine," Besides this, there are several smaller ones near by in the same county.

In Caldwell county several veins of gold can be found, but only one is at present being worked. This is called Baker's Mountain, and operated by Messrs. Callett & Smith.—They are doing a profitable business, altho' the metal only averages about 72 per cent. to the pennyweight. I saw several specimens of this gold, and think that in quality it falls quite short of a fair average, as compared with most of the veins in this section of the country.

In the counties of Rutherford, Burke and M'Dowell, a great quantity of gold is known to exist. The names of the more prominent mines are as follows, viz: "Whiteside's" "Rain Creek," "Jamestown," "Bracket Town," "Brindle," "Wilkinson," "Dawsey." These are surface and deposite mines, and have been very partially worked. But partial as have been the operations, they have extracted from them upwards of *two million six hundred thousand dollars worth of gold.* Many deposits known to exist have never yet been worked. There are a great many other natural advantages connected with these countries, but as this is designed to be a mineral letter, I must not digress.

In Rutherford county, there is a mine called the "Willis' Mine," known to contain lead to a large extent. Gold, copper and silver have also been discovered in this mine.

The "King's Mountain" mine, in Gaston county, near the high peak of the mountain and immediately on the waters of King's creek, is an immensely rich mine for gold. The vein occurs on a slate formation, and varies in breadth from 18 inches to 6 ft. This gold is worth 96¼ cts. per pennyweigh*. In the commencement of operations at this place one hand has been known to produce as much as $100 per month.

Col. Hake, of Lincolnton brought me a day or two ago, some white, bean like substance, which he took out of a spring one and a half miles from town. He supposed that it was chalk or white clay, but I immediately pronounced it to be magnesia of the finest quality, and my subsequent experiments and examination fully convenced me that it was the *pure native magnesia.* I collected about a pint of it, which I now have with me. The spring is bold and pure, and the water suffiiently impregnated to give it a most delightful taste. This is the second vein of native magnesia known in this country. The other is found near the Sybil Cave in New Jersey. The Catawba spring, in this county, and "Willow" spring, are both possessed of the finest mineral qualifications for summer resorts. I might give their medicinal properties, but as I have already exceeded a proper length for a letter, I must conclude, by simply remarking that, in reference to the elements of wealth found in this section of North Carolina, "the half hath not been told."

BEAUMONT.

P.S. Some years since a piece of *solid gold* weighing *twenty-eight pounds, avirdupois,* was found in Cabarrus county, near Concord, I think that it is now in the Philadelphia Museum.

Mining Interest, Copper, etc.

The Detroit Free Press says:—"We learn that the schooner Iena is now on the flats with a cargo of 44 tons native copper, for the Boston and Pittsburg Copper Company, which goes to Pittsburg to be smelted.

This company have shipped this season as follows:

Per schooner Iena, in the spring	44	tons.
" Propeller Goliath	180	"
" Do. Chicago	120	"
" S. B. Sam. Ward	52	"
" Schooner Iena	44	"
And the Champion will bring	50	more.
Making in all the amount	490	tons.

This is native copper, and averages over 80 per cent., and is sold in Boston, at 16¼ cents per lb., of copper, the purchaser smelting it at his own expense. The net proceeds of this ore will amount to about $115,000, and the expense of working the mine for a year are just about $50,000, leaving for dividend this year $65,000."

It must be admitted that the produce of some of the Lake Superior copper mines is astonishing; and we are induced to believe that we have much to learn yet in relation to the riches and extent of these mines.

The following article from the Journal of Commerce, contains much of interest and therefore we give it a place in the Journal, believing that it will be acceptable to a majority of our readers.

Much has already been written about this great mineral region. Many statements have been based upon vague rumor, or a hasty glance along the shore. These have been trumpeted far and wide by interested persons, for the sole purpose of creating an excitement in wild speculation. On such reports little or no dependance can be placed. On the other hand, many of our learned men, who are much better acquainted with rocks in books, than in mines and mountains, have condemned the country on the first slight inspection, without waiting for results. On their representations little or no reliance is to be placed. Yet it ought not to be difficult to ascertain the facts. Several eminent geologists have explored the territory in question, and some of them at least, are entirely disinterested. Conversing with one of the latter the other day, who, by hard labor as a miner and explorer for the last three years, and by his geological science ecpecially in the department of minerals proper, is probably as well qualified as any other man living, to impart the information desired, we persuaded him to allow us to use it for the benefit of our readers. The substance of his statement we here subjoin.

In the first place, the idea that the "whole country is filled with copper, and that one cannot go through the woods without stumbling over it," is absurd. Equally foolish is the idea that where pure native copper is discovered, there is no good reason to expect important deposits of copper ore. This latter idea is often advanced by persons who affect to be learned in the business of mining and the doctrines of geology, but when closely questioned, their experience is found to vanish into the opinions of others, or narrow down to the working of one or two mines of yellow copper in clay slate or killas; whereas, had they ever visited the mines of Cuba, or even seen Carn Brae, or Fowey Consols in Cornwall, they would have come to a different conclusion.

In the second place, although copper is not to be found every where on Lake Superior, its existence in vast quantities, enclosed in strong, well defined metallic veins, cutting through the whole substance of the rocky strata for miles and miles inland, is no longer a *problem.* The discovery of some twenty or thirty boulders of native copper loose upon the surface, the larger of which varied in weight from one to four thousand pounds, had led to the discovery of masses of pure copper in the above-mentioned veins varying in weight from 2,000 to 80,000 lbs. Numerous veins yielding copper of this description have been explored, both in length and depth to such an extent as to leave no doubt of the existence of immense similar deposites. Many consider those deposites of native copper very extraordinary, and so they are; but they are not altogether unparalleled. At the Copper Mine river, in the far North West, copper boulders are far more numerous than on Lake Superior. Similar deposites of native copper have been found very abundant in the Mednoi Islands; also in Iceland, Russia, Cuba, South America and Japan. The mines of Suruga, Kyno, Kuni and Atsingo, have yielded "amazing quantities" of native copper. Cargoes and cargoes have been shipped from thence by the Dutch and Portuguese. And not only cargoes and cargoes of copper, but, (if we may credit history) whole ship-loads of gold and silver, derived from the same source, and found in connection with the copper. This extraordinary product formerly constituted 'the wealth of many whole provinces," and is at present by no means exhausted. Here then we have, as it were, a "fac simile" of Lake Superior, except that the copper of Suruga contained a large percentage of gold. Other things being in harmony, should we not reasonably expect to find gold with copper on Lake Superior? We answer yes; and can add, on the authority of our respected informant, that it is thus found. On making a cross cut on Prince's vein on the main land, and North shore of the Lake, native copper was detected, which, however, soon gave way to vitreous or grey sulphuret of copper, and that in turn to metallic silver, with which is found a portion of gold. Instead of this being something extraordinary, it is just what ought to be expected in order to make out the harmony of nature, whose laws are uniform and constant. The occurrence of silver on Lake Superior is nearly as frequent as that of cop-

per; although not in so large quantities.—Our informant has seen it in different localities, on both sides of the lake, too numerous to mention. It invariably accompanies the native copper. It is also found associated with galena, at Thunder Cape, on the north shore. It is found in connection with Blende in other places. It has been found in loose masses of several pounds' weight, particularly at Eagle river; also in amygdules and masses, in the green stone; in calcareous spar, quartz and laumonite, and, in short, under such a variety of circumstances as to leave no doubt that it exists co-extensively with the copper. As the silver exists here in the same connection in which it has been found in the Altai Mountains, and the province of Bingo and Kattami in the Empire of Japan, (which places have yielded incredible quantities of this precious metal,) it is not unreasonable to expect a similar result on Lake Superior. At least twelve different localities of silver have been discovered on the Canada shore of the Lakes during the last year. Some of these deposites, together with the Copper Falls, Cliff, Eagle river and several other mines on the south shore, cannot fail to be worked for their produce of silver alone, independent of the copper with which they are connected. Besides the whole extent of Point Keweenon, silver has been found in numerous veins on Isle Royal, and in the Ontonagon and Black River districts, in sufficient quantities to give every reasonable assurance that the Lake Superior country is one day destined to become to the United States what the Altai have been to Russia, and the provinces of Japan to the Dutch and Portuguese.

Not a few, and especially Cornish miners, have expressed great fears that there would not be found a supply of the ordinary yellow copper ore on Lake Superior, in addition to the native copper connected with the silver. Such persons may rest assured that there is no just foundation for their fears; for if they travel inland, westward and southward from Chocolate river, they will find a country embracing about two thousand square miles, very similar to Cornwall, bounded on the north by the Huron mountains of granite, and frequently interrupted by similar ridges while the vallies are filled up with killas or talcose and clay slates, caples and elvans, accompanied with quartz veins loaded with mundic, rich gossans, and not unfrequently with yellow copper and carbonate of iron. In other places, in the same region may be seen large courses of specular and hydrous oxide of iron, similar to that of Padstow and Lostwithel, in Cornwall. So close is the resemblance of the rocks in this region to those of Cornwall, that were it not for the heavy growth of timber, one might easily imagine himself located either at Carlstock and Kit-Hill, or Dalcoath and Carn Bren. Both the yellow and the horse flesh copper have been found in this region, and also lead in cross courses. Here then is a second Cornwall, with 120 miles of lake coast, abounding with good soil, good lumber, good fisheries, and large flowing rivers supplying numerous water powers, in addition to its rich mineral resources. Time would fail to mention the numerous discoveries of gray copper out of the region last described; such as Lake La Belle, Montpelier mine, and others. The black oxide, the red oxide, the blue and green carbonates, the rich gray sulphuret, as well as the yellow bisulphuret of copper, have all been found on the American shore of the Lake, near the native copper and will all be found more abundantly by further excavation. No fears, therefore, need be entertained on account of a deficiency of copper *ore*.

But the most important question to be examined is this: are these mines likely to yield a profit to adventurers in working them? *In the present state of things*, our informant says, No. With the exception of a few localities favorably situated, the great body of these lands might as well be in the moon or Jupiter, as far as profit in mining is concerned. And the reason is at once palpable and obvious. In the first place, the United States Congress have given no encouragement to agricultural pursuits in this country, although there are several millions of acres immediately southward of the middle and western portion of the Lake, offering many attractions and capable of sustaining a dense farming population. Mining, in order to be profitable, should, as far as possible, be sustained by agriculture. In Cornwall, almost every miner has his little plantation of potatoes and garden vegetables He can occasionally trap a hare, or gain a supply of herring which frequent the coast, and consequently afford to work much cheaper than he could otherwise. If there were a good agricultural population settled on Lake Superior, provisions would not cost more than half their present price.—But the want of provisions and supplies for mining is not so much an obstacle as the want of facilities for transporting such supplies over the Lake George flats, and around the falls of St. Mary's river. The delays, difficulties and extra expenses of transphipment at the Sault of St. Mary, are sufficient, of themselves, to exhaust all the profits of mining, especially when we take into consideration the shortness of the season, the prevalence of fogs and adverse winds, and the want of light-houses and harbor accomodations.—A steamer will frequently cross the Atlantic before a schooner can pass from the Saulte to Whitefish Point, a distance of only about 40 miles. But suppose all these obstacles removed, there is still another more weighty objection to the working of these mines, in the minds of those who have capital to adventure, viz: the high price of the lands. While the rich lead lands of Missouri, Iowa, Illinois and Wisconsin are thrown into market at $1.25 per acre, why should the copper lands of this inhospitable region be sold, or rather offered, at $2 50 and $5.00 per acre? The effect of this act of Congress has been to drive both capital and enterprise over to the British side of the Lake, where mineral lands, eqally as good, can be purchased *in fee simple* for eighty cents per acre. Shonld Congress ever re consider this matter, we are confident they will be no less liberal than the British Government. Should they put the lands at $1, or $1.25 at most, per acre, and throw them open to both farmers and miners, they would soon realise millions, instead of thousands in the sale. We cannot doubt that Congress will soon open a ship canal around the Falls of St. Mary, and also build light houses along the shore, especially when they consider that the American coast on this Lake exceeds in extent one half of the Atlantic coast of the United States, and that its fisheries are scarcely less important than those of Newfoundland.

Probably some eight or ten million pounds of pure copper, or what is called ore of a high per centage, and would yield that amount when smelted, have been raised or excavated on Lake Superior, More than half of this has been obtained from the Cliff Mine, the property of the Boston and Pittsburg Co. Nearly one thousand tons have been taken out during the past year, which equals, already, one-twentieth of all the copper produced by Great Britian and all her colonies.—(See Grylls's Mining Sheet, for 1847.) Much of the silver ore of Prince's large vein on the north shore is found to yield from one to two per cent. of silver. The Copper Falls and other locations on the southern shore, and Montreal and Quebec, and other locations on the northern shore, give promise of similar riches, A new state is about to spring into existence, called Minesota, whose port of entry will embrace the Western extremity of Lake Superior. Excellent coal lands lie between that harbor and the Red River settlement. What then ought to be the action of Congress in reference to these important national resources.

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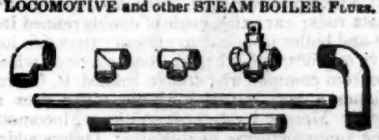

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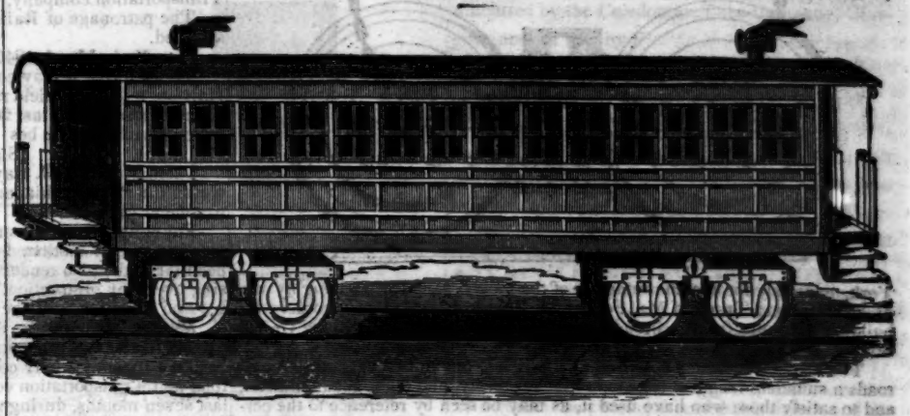

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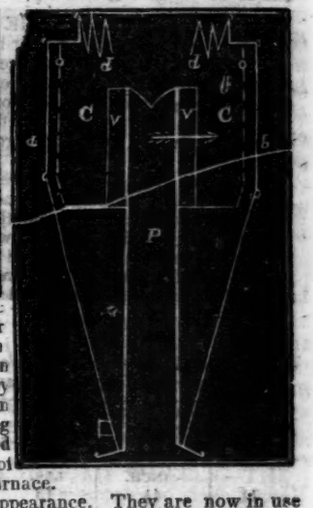


Our improved Spark Arresters have been extensively used during the last year on both passenger & freight engines, and have been brought to such a state of perfection that no annoyance from sparks or dust from the chimney of engines on which they are used is experienced.

These Arresters are constructed on an entirely different principle from any heretofore offered to the public The form is such that a rotary motion is imparted to the heated air smoke and sparks passing through the chimney, and by the centrifugal force thus acquired by the sparks and dust they are separated from the smoke and steam, and thrown into an outer chamber of the chimney through openings near its top, from whence they fall by their own gravity to the bottom of this chamber; the smoke and steam passing off at the top of the chimney, through a capacious and unobstructed passage, thus arresting the sparks without impairing the power of the engine by diminishing the draught or activity of the fire in the furnace.

These chimneys and arresters are simple, durable and neat in appearance. They are now in use on the following roads, to the managers and other officers of which we are at liberty to refer those who may desire to purchase or obtain further information in regard to their merits:

R. L. Stevens, President Camden and Amboy Railroad Company; Richard Peters, Superintendant Georgia Railroad, Augusta, Ga.; G. A. Nicolls, Superintendant Philadelphia, Reading and Pottsville Railroad, Reading, Pa.; W. E. Morris, President Philadelphia, Germantown and Norristown Railroad Company, Philadelphia; E. B. Dudley, President W. and R. Railroad Company, Wilmington, N. C.; Col. James Gadsden, President S. C. and C. Railroad Company, Charleston, S. C.; W. C. Walker, Agent Vicksburgh and Jackson Railroad, Vicksburgh, Miss.; R. S. Van Rensselaer, Engineer and Sup't Hartford and New Haven Railroad; W. R. M'Kee, Sup't Lexington and Ohio Railroad, Lexington, Ky.; T. L. Smith, Sup't New Jersey Railroad Trans. Co.; J. Elliott, Sup't Motive Power Philadelphia and Wilmington Railroad, Wilmington, Del.; J. O. Sterns, Sup't Elizabethtown and Somerville Railroad; R. R. Cuyler, President Central Railroad Company, Savannah, Ga.; J. D. Gray, Sup't Macon Railroad, Macon, Ga.; J. H. Cleveland, Sup't Southern Railroad, Monroe, Mich.; M. F. Chittenden, Sup't M. P. Central Railroad, Detroit, Mich.; G. B. Fisk, President Long Island Railroad, Brooklyn.

Orders for these Chimneys and Arresters, addressed to the subscribers, care Messrs. Baldwin & Whitney, of this city or to Hinckly & Drury, Boston, will be promptly executed. FRENCH & BAIRD.

N. B.—The subscribers will dispose of single rights, or rights for one or more States, on reasonable terms. *Philadelphia, Pa., April 6, 1844.*

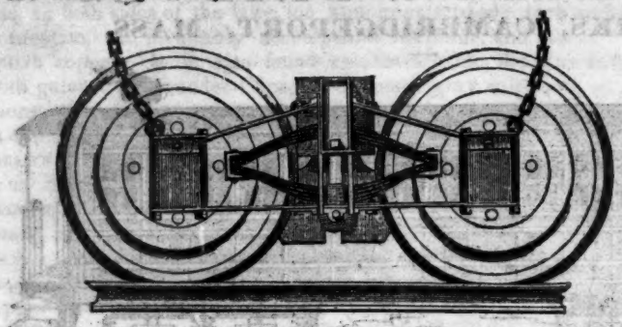
*** The letters in the figures refer to the article given in the *Journal* of June, 1844. ja45

LOCOMOTIVE AND CAR AXLES. The Subscribers are now prepared to receive orders for the well known and approved *Reading Locomotive and Car Axles*—drawn to any required pattern from *Bloom Iron only.* Address

SAM'L KIMBER & CO.,
Willow Street Wharf,
1tf Philadelphia, Pa.

RAILROAD IRON.—THE "MONTOUR" Iron Company," Danville, Pa., is prepared to execute orders for the heavy Rail Bars of any pattern now in use, in this country or in Europe, and equal in every respect in point of quality. Apply to MURDOCK, LEAVITT & CO.,
Agents.
1y48 77 Pine St., New York.

RAY'S EQALIZING RAILWAY TRUCK.—THE SUBSCRIBER having recently formed a business connection in the City of New



York, expressly for the manufacture of the newly patented and highly approved Railroad Truck of Mr. Fowler M. Ray, is ready to receive orders for building the same, from Railroad Companies and Car Builders in the United States, and elsewhere.

The above Truck has now been in use from one to two years on several roads a sufficient length of time to test its durability, and other good qualities, and to satisfy those who have used it, as may be seen by reference to the certificates which follow this notice.

There have been several improvements lately introduced upon the Truck, such as additional springs in the bolster of passenger cars, making them delightful riding cars—adapting it to tenders, trucks forward of the locomotive, and freight cars, which, with its original good qualities, make it in all respects the most desirable truck now offered to the public.

Orders for the above, will, for the present, be executed at the New York Screw Mill, corner 33d street and 3d avenue, (late P. Cooper's rolling mills) and at the Steam Engine Shop of T. F. Secor & Co., foot of 9th street, East river, (of which firm the subscriber was late a partner) under the immediat supervision of Mr. Ray himself.

Several sets of trucks containing the latest improvements have recently been turned out for the New York and Erie railroad, and the New Jersey Transportation company, which may be seen upon said roads.

The patronage of Railroad Companies and Car Builders is respectfully solicited.

New York, May 4, 1846. W. H. CALKINS, and Others.

To all whom it may concern:—This is to certify that the New Haven, Hartford and Springfield railroad co., have had in use six sets of F. M. Ray's patent trucks for the last 20 months, during which time it appears to me, they have proved to be the bes and most economical truck now in use.

[Signed,] WILLIAM ROE, Sup't of Power.

I certify that F. M. Ray's Patent Equalizing Railroad Truck has been in use on the Philadelphia and Reading railroad for some time past, under a passenger car.

For simplicity of construction, economy in cost, lightness of material, and extreme ease of motion, I consider it the best truck we have ever used. Its peculiar make also renders it less liable to be thrown off the track, when passing over any obstruction. We intend using it extensively under the passenger and freight cars of the above road.

Reading, Pa., October 6, 1845. [Signed,] G. A. NICOLL, Sup.t Transportation, etc., Philadelphia and Reading Railroad.

To all whom it may concern:—This is to certify that the N. Jersey Railroad and Transportation company have used Fowler M. Ray's Truck for the last seven months, during which time it has operated to our entire satisfaction. I have no hesitation in saying that it is the simplest and most economical truck now in use. [Signed,] T. L. SMITH,

Jersey City, November 4, 1845. N. Jersey Railroad and Transp. Co.

This is to certify that F. M. Ray's Patent Equalizing Railroad Truck has been in use on the Long Island railroad for the last year, under a freight car.

For simplicity of construction, economy in cost, lightness of material and ease of motion, I consider it equal to any truck we have in use.

Long Island Railroad Depot, Jamaica November 12, 1845. } [Signed,] JOHN LEACH, Sup't Motive Power.

1y19

ENGLISH PATENT WIRE ROPES—FOR THE USE OF MINES, RAILWAYS, ETC.—for sale or imported to order by the subscriber.

These Ropes are manufactured on an entirely different principle from any other, and are now almost exclusively used in the collieries and on the railways in Great Britain, where they are considered to be greatly superior to hempen ones, or iron chains, as regards safety, durability and economy. The plan upon which they are made effectually secures them from corrosion in the interior, as well as the exterior of the rope, and gives a greater compactness and elasticity than is found in any other manufacture.

Many of these ropes have been in constant operation in the different mines in England, and on the Blackwall and other inclined planes, for three and four years, and are still in good condition.

They have been applied to almost every purpose for which hempen ropes have been used—mines, heavy cranes, standing rigging, window cords, lightning conductors, signal halyards, tiller ropes, etc. Reference is made to the annexed statement for the relative strength and size. Testimonials from the most eminent engineers in England can be shown as to their efficiency, and any additional information required respecting the different descriptions and application will be given by

ALFRED L. KEMP,
75 Broad street, New York, sole agent in the United States.

Statement of Trial made at the Woolwich Royal Dock Yard, of the Patent Wire Ropes, as compared with Hempen Ropes and Iron Chains of the same strength.—October, 1841.

WIRE ROPES.				HEMPEN ROPES.			CHAINS.		STRENGTH
Wire gauge number.	Circumference of rope.	Weight per fathom.		Circumference of rope.	Weight per fathom.		Weight per fathom.	Diameter of iron.	Tons.
	INCH.	LBS.	OZ.	INCH.	LBS.	OZ.	LBS.	INCH.	
11	4½	13	5	10	24	–	50	15-16	20
13	3½	8	3	8½	16	–	27	11-16	13½
14	3½	6	11	7½	12	8	17	9-16	10½
15	2½	5	2	6½	9	4	13½	1-2	7½
16	2½	4	3	6	8	8	10½	7-16	7

N.B. The working load, with a perpendicular lift, may be taken at 6 cwt. for every lb. weight per fathom, so that a rope weighing 5 lbs. per fathom would safely lift 3360 lbs., and so on in proportion. 1y24

RAILROAD SCALES.—THE ATTENTION of Railroad Companies is particularly requested to Ellicotts' Scales, made for weighing loaded cars in trains, or singly, they have been the inventors, and the first to make platform scales in the United States; supposing that an experience of **20** years has given a knowledge and superior advantage in the business.

The levers of our scales are made of wrought iron, all the bearers and fulcrums are made of the best cast steel, laid on blocks of granite, extending across the pit, the upper part of the scale only being made of wood. E. Ellicott has made the largest Railroad Scale in the world, its extreme length was one hundred and twenty feet, capable of weighing ten loaded cars at a single draft. It was put on the Mine Hill and Schuylkill Haven Railroad.

We are prepared to make scales of any size to weigh from five pounds to two hundred tons.

ELLICOTT & ABBOTT.
Factory, 9th street, near Coates, cor. Melon st.
Office, No. 3 North 5th street,
1y25 Philadelphia, Pa.

NICOLL'S PATENT SAFETY SWITCH for Railroad Turnouts. This invention, for some time in successful operation on one of the principal railroads in the country, effectually prevents engines and their trains from running off the track at a switch, left wrong by accident or design.

It acts independently of the main track rails, being laid down, or removed, without cutting or displacing them.

It is never touched by passing trains, except when in use, preventing their running off the track. It is simple in its construction and operation, requiring only two Castings and two Rails; the latter, even if much worn or used, not objectionable.

Working Models of the Safety Switch may be seen at Messrs. Davenport and Bridges, Cambridgeport, Mass., and at the office of the Railroad Journal, New York.

Plans, Specifications, and all information obtained on application to the Subscriber, Inventor, and Patentee G. A. NICOLLS,
ja15 *Reading, Pa.*

TO RAILROAD COMPANIES AND MANufacturers of railroad Machinery. The subscribers have for sale Am. and English bar iron, of all sizes; English blister, cast, shear and spring steel; Juniata rods; car axles, made of double refined iron; sheet and boiler iron, cut to pattern; tiers for locomotive engines, and other railroad carriage wheels, made from common and double refined B. O. iron; the latter a very superior article. The tires are made by Messrs. Baldwin & Whitney, locomotive engine manufacturers of this city. Orders addressed to them, or to us, will be promptly executed.

When the exact diameter of the wheel is stated in the order, a fit to those wheels is guaranteed, saving to the purchaser the expense of turning them out inside. THOMAS & EDMUND GEORGE,
a45 N. E. cor. 12th and Market sts., Philad., Pa.

LAP—WELDED
WROUGHT IRON TUBES
FOR
TUBULAR BOILERS,
FROM 1 1-4 TO 6 INCHES DIAMETER,
and
ANY LENGTH, NOT EXCEEDING 17 FEET.

These Tubes are of the same quality and manufacture as those so extensively used in England, Scotland, France and Germany, for Locomotive, Marine and other Steam Engine Boilers.

THOMAS PROSSER,
Patentee.
28 Platt street, New York.

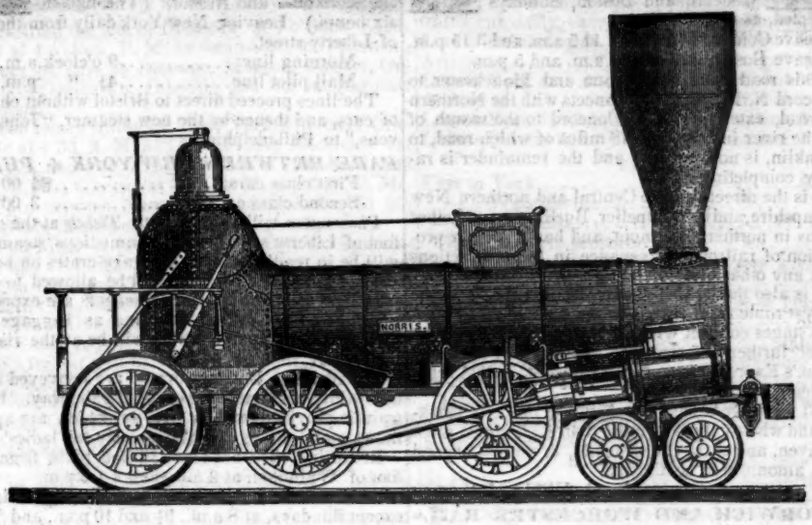
PATENT HAMMERED RAILROAD, SHIP and Boat Spikes. The Albany Iron and Nail Works have always on hand, of their own manufacture, a large assortment of Railroad, Ship and Boat Spikes, from 2 to 12 inches in length, and of any form of head. From the excellence of the material always used in their manufacture, and their very general use for railroads and other purposes in this country, the manufacturers have no hesitation in warranting them fully equal to the best spikes in market, both as to quality and appearance. All orders addressed to the subscriber at the works, will be promptly executed. JOHN F. WINSLOW, *Agent.*

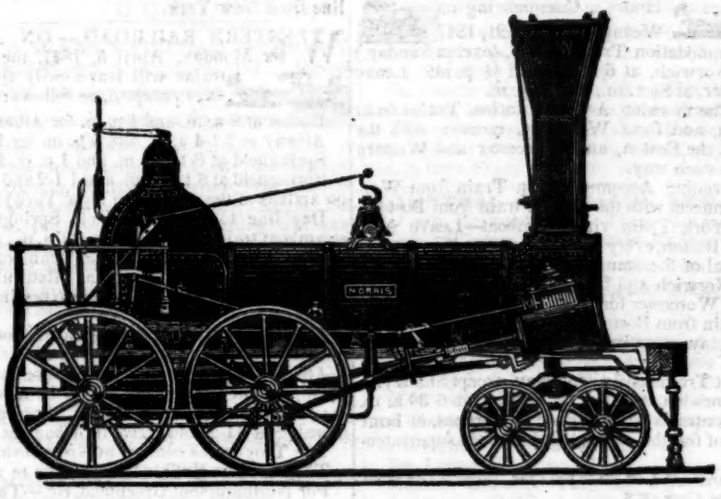
Albany Iron and Nail Works, Troy, N. Y.

The above spikes may be had at factory prices, of Erastus Corning & Co., Albany; Hart & Merritt, New York; J. H. Whitney, do.; E. J. Etting, Philadelphia; Wm. E. Coffin & Co Boston. ja45

NORRIS' LOCOMOTIVE WORKS.

BUSHHILL, SCHUYLKILL SIXTH-ST., PHILADELPHIA,





MANUFACTURE to order Locomotive Steam Engines of every plan or size.

Their shops being enlarged, and their arrangements considerably extended to facilitate the speedy execution of work in this branch, they can offer to Railway Companies unusunl advantages for prompt delivery of Machinery of superior workmanship and finish.

Connected with the Locomotive business, they are also prepared to furnish, at short notice, Chilled Wheels for Cars of superior quality.

Iron and Brass castings, Axles, etc., fitted up complete with Trucks or otherwise.

NORRIS & BROTHERS.

MACHINE WORKS OF ROGERS, Ketchum & Grosvenor, Patterson, N. J. The undersigned receive orders for the following articles, manufactured by them of the most superior description in every particular. Their works being extensive and the number of hands employed beinglarge, they are enabled to execute both large and small orders with promptness and despatch.

Railroad Work.

Locomotive steam engines and tenders; Driving and other locomotive wheels, axles, springs & flange tires; car wheels of cast iron, from a variety of patterns, and chills; car wheels of cast iron with wrought tires; axles of best American refined iron; springs; boxes and bolts for cars.

Cotton, Wool and Flax Machinery

of all descriptions and of the most improved patterns, style and workmanship.

Mill gearing and Millwright work generally; hydraulic and other presses; press screws; callenders; lathes and tools of all kinds; iron and brass castings of all descriptions.

ROGERS, KETCHUM & GROSVENOR,

a45 Paterson, N. J., or 60 Wall street, N. York.

THE SUBSCRIBER has on hand a good assortment of his best Leveling and Surveying Instruments, among them his improved Compass for taking angles without the needle—also Bells, suitable for Churches, Railroad Depots, etc.

ANDREW MENEELY.

West Troy, May 12, 1847. 1y*21

PIG AND BLOOM IRON.—THE SUBSCRIBERS are agents for the sale of numerous brands of Charcoal and Anthracite Pig Iron, suitable for Machinery, Railroad Wheels, Chains, Hollowware, etc. Also several brands of the best Puddling Iron, Juniatta Blooms suitable for Wire, Boiler Plate, Axe Iron, Shovels, etc. The attention of those engaged in the manufacture of Iron is solicited by

A. WRIGHT & NEPHEW,

12tf Vine St. Wharf, Philadelphia.

LAP-WELDED WROUGHT IRON TUBES for Tubular Boilers, from 1¼ to 15 inches diameter, and any length not exceeding 17 feet—manufactured by the Caledonian Tube Company, Glasgow, and for sale by

IRVING VAN WART,
12 Platt street, New York.
JOB CUTLER, Patentee.

These Tubes are extensively used by the British Government, and by the principal Engineers and Steam Marine and Railway Companies in the Kingdom. 28tf

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SPRING STEEL FOR LOCOMOTIVES, Tenders and Cars. The Subscriber is engagep in manufacturing Spring Steel from 1¼ to 6 inches in width, and of any thickness required: large quantities are yearly furnished for railroad purposes, and wherever used, its quality has been approved of. The establishment being large, can execute orders with great promptitude, at reasonable prices, and the quality warranted. Address

JOAN F. WINSLOW, *Agent*,
1y Albany Iron and Nail Works,

THE SUBSCRIBERS ARE PREPARED TO exrcute orders at their Phœnix Works for Railroad Iron of any required pattern, equal in quality and finish to the best imported.

REEVES, BUCK & CO.,
Philadelphia.
ROBERT NICHOLS, Agent,
26tf No. 79 Water St., New York.

KEARNEY FIRE BRICK. F. W. BRINLEY, Manufacturer, Perth Amboy N. J. Guaranteed equal to any, either domestic or foreign. Any shape or size made to order. Terms, mos. from delivery of brick on board. Refer to

James P. Allaire, Peter Cooper, Murdock, Leavirt & Co. } New York.
J. Triplett & Son, Richmond, Va.
J. R. Anderson, Tredegar Iron Works, Richmond, Va.
J. Patton, Jr. Colwell & Co. } Philadelphia, Pa.
J. M. L. & W. H. Scovill, Waterbury, Con.
N. E. Screw Co. Eagle Screw Co. } Provicence, R. I.
William Parker, Supt. Bost. and Worc. R. R.
New Jersey Malleable Iron Co., Newark N. J
Gardiner, Harrison & Co. Newark, N J

25,000 to 30,000 made weekly. 38

CHILLED RAILROAD WHEELS.—THE undersigned are now prepared to manufacture their Improved Corrugated Car Wheels, or Wheels with any form of Spokes or Disks, by a new process which prevents all strain on the metal, such as is is produced in all other chilled wheels, by the manner of casting and cooling. By this new method of manufacture, the hubs of all kinds of wheels may be made whole—that is, without dividing them into sections—thus rendering the expense of banding unnecessary; and the wheels subjected to this process will be much stronger than those of the same size, and weight, when made in the ordinary way.

A. WHITNEY & SON,
Willow St. below 13th,
Nov. 10, 1847. [tf.] Philadelphia, Penna.

THE NEWCASTLE MANUFACTURING Company continue to furnish at the Works, situated in the town of Newcastle, Del., Locomotive and other steam engines, Jack screws, Wrought iron work and Brass and Iron castings, of all kinds connected with Steamboats, Railroads, etc.; Mill Gearing of every description; Cast wheels (chilled) of any pattern and size, with Axles fitted, also with wrought tires, Springs, Boxes and bolts for Cars; Driving and other wheels for Locomotives.

The works being on an extensive scale, all orders will be executed with promptness and despatch. Communications addressed to Mr. William H. Dobbs, Superintendent, will meet with immediate attention.

ANDREW C. GRAY,
a45 President of the Newcastle Manuf. Co.

BOSTON AND MAINE RAILROAD.
Upper Route, to Portland and the East.

WINTER ARRANGEMENT,

Commencing October 4, 1847.

PORTLAND TRAINS.

Leave Boston at 7 A.M. and 2½ P.M.
Leave Portland at 7½ A.M. and 3 P.M.

GREAT FALLS TRAIN.

Leave Boston at 3½ P.M.
Leave Great Falls at 6½ A.M.

LAWRENCE TRAINS.

Leave Boston at 7, 11½ a.m., 2½, 3½, 5½ p.m.
Leave Lawrence at 7, 8½, 11 a.m., 3½, 6½ p.m.

HAVERHILL TRAINS.

Leave Boston at 11½ A.M. and 5½ P.M.
Leave Haverhill at 7 A.M. and 3½ P.M.

READING TRAINS.

Leave Boston at 8½ A.M. and 6½ P.M.
Leave Reading at 6·50 A.M. and 1½ P.M.

MEDFORD BRANCH TRAINS.

Leave Boston at 7½, a.m., 12 m., 2½, 4½, 6 p.m.
Leave Medford at 7, 8½, a.m., 1½, 3½, 5 p.m.

The Depot in Boston is on Haymarket Square.
1y31 CHAS. MINOT, *Super't.*

BOSTON AND PROVIDENCE RAILroad. Passenger Notice. Summer Arrangement. On and after Monday, April 5, 1847, the Passenger Trains will run as follows:

Steamboat train via Stonington—Leaves Boston every day, except Sunday, at 5 o'clock p.m.

Accommodation Trains—leave Boston at 7 and 10½ a.m. and 4 p.m., and Providence at 7½ and 10½ a.m. and 4½ p.m.

Dedham trains, leave Boston at 8 a.m., 12½, 3½, 6½ and 9 p.m., Leave Dedham at 7 and 9½ a.m. and 2½, 5½ and 8 p.m.

Stoughton trains, leave Boston at 11½ a.m. and 5½ p.m. Leave Stoughton at 7 10 a.m. and 3½ p.m.

All baggage at the risk of the owners thereof.
25tf W. RAYMOND LEE, *Sup't.*

NEW YORK & HARLEM RAILROAD CO.—Summer Arrangement.—On and after Tuesday, June 1st, 1847, the cars will run as follows, until further notice. Up trains will leave the City Hall for—

Yorkville, Harlem and Morrisana at 6, 8 and 11 a.m., 2, 2 30, 5 and 7 p.m.

For Morrisiana, Fordham, Williams' Bridge, Tuckahoe, Hart's Corner and White Plains, 7 and 10 a.m., 4 and 5 30 p.m.

For White Plains, Pleasantville, Newcastle, Mechanicsville and Croton Falls, 7 a.m. and 4 p.m. Freight train at 1 p.m.

Returning to New York, will leave—

Morrisiana and Harlem, 7, 8 20 and 9 a.m., 1, 3, 4 30, 6, 6 28 and 8 p.m.

Fordham, 8 08 and 9 15 a.m., 1 20 and 6 15 p.m.

Williams Bridge, 8 and 9 08 a.m., 1 10, 6 08 p.m.

Tuckahoe, 7 35 and 8 25 a.m., 12 55 and 5 52 p.m.

White Plains, 7 10 and 8 35 a.m., 12 50, 5 35 p.m.

Pleasantville, 8 15 a.m. and 5 15 p.m.

Newcastle, 8 a.m. and 5 p.m.

Mechanicsville, 7 48 a.m. and 4. 48 p.m.

Croton Falls, 7 30 a.m. and 4 30 p.m. Freight train at 10 a.m.

Freight train will leave 32d street for Croton Falls and intermediate places, 4 a.m and City Hall 1 p.m.

Returning, leave Croton Falls 10 a.m. and 9½ p.m.

ON SUNDAYS, the trains will run as follows:

Leave City Hall for Croton Falls, 7 a.m, 4 p.m.

Croton Falls for City Hall, 7 30 a.m., 4 30 p.m.

Leave City Hall for White Plains and intermediate places, 7 and 10 a.m. 4 and 5 30 p.m.

White Plains for City Hall, 7 10 and 8 35 a.m., 12 30 and 5 35 p.m.

Extra trains will be run to Harlem, Fordham and Williams Bridge on Sunday, when the weather is fine.

The trains to and from Croton Falls will not stop on N. York island, except at Broome st. and 32d st.

A car will preceed each train 10 minutes to take up passengers in the city.

Fare from New York to Croton Falls and Somers $1, to Mechanicsville 87½c., to Newcastle 75c., to Pleasantville 62½c. to White Plains 50c. 25tf

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CONCORD RAILROAD.—PASSENGER Trains in connection with the Lowell & Nashua Railroads, run daily between Concord and Boston, Sundays excepted, as follows, viz:

Leave Concord at 5 40 and 11 5 a.m. and 3 15 p.m.

Leave Boston at 7 and 11 a.m. and 5 p.m.

This road runs by Nashua and Manchester to Concord N. H., where it connects with the Northern railroad, extending from Concord to the mouth of White river in Vermont, 18 miles of which road, to Franklin, is now opened, and the remainder is rapidly completing.

It is the direct route to Central and northern New Hampshire, and to Montpelier, Burlington, and other towns in northern Vermont, and has a greater proportion of railroad conveyance in those directions than any other line.

It is also the British Steam Mail Line, and the nearest route from Boston to the Canadas. Numerous stages connect with all parts of the road.

For further information, apply at B. P. Cheney & Co.'s Express office, No. 8 Court St., and Averill & Dean, No. 15 Elm St.

All passengers' baggage should be properly marked, and when valued at more than $50, notice must be given, and extra charges paid, or no loss beyond such amount will be allowed.
26tf N. G. UPHAM, Supt.

NORWICH AND WORCESTER RAILRoad. Summer Arrangement. Change of Hours. Commencing on Wednesday, April 21, 1847.

Accommodation Trains, daily, (except Sunday.) Leave Norwich, at 6 a. m., and 4½ p. m. Leave Worcester, at 8½ a. m., and 4½ p. m.

☞ The morning Accommodation Trains from Norwich, and from Worcester, connect with the trains of the Boston, and Worcester and Western railroads each way.

The Evening Accommodation Train from Worcester connects with the 2½ p.m. train from Boston.

New York Train via Steamboat—Leave Norwich for Boston, every morning, except Monday, on the arrival of the stamboat from New York, stopping at Norwich and Danielsonville.

Leave Worcester for New York, upon the arrival of the train from Boston, at about 6½ p.m., daily, except Sunday, stopping at Danielsonville and Norwich.

Freight Trains daily each way, except Sunday.—Leave Norwich at 7, and Worcester at 6 30 a. m. Special contracts will be made for cargoes, or large quanties of freight, on application to the superintendent.

☞ *Fares are Less when paid for Tickets than when paid in the Cars.* ☜
32 1y J W. STOWELL, Sup't

LONG ISLAND RAILROAD COMPANY. Summer Arrangement. On and after Monday May 1st, trains will run as follows, except Sundays:

Leave—Brooklyn at 9 1-2 a.m. for Farmingdale, 1 1-2 p.m. for Greenport, at 4 p.m. for Farmingdale.

Leave Farmingdale at 7 a.m for Brooklyn, 12 m. do., at 3 1-4 do. do.

Leave Greenport at 8 1-2 a.m. for Brooklyn.

Leave Jamaica at 8 a.m. for Brooklyn, at 1 p.m. do., at 4½ p.m do.

On Saturdays, a train will leave Brooklyn for Yaphank, at 4 p.m. Leave Yaphank, on Mondays for Brooklyn at 5 1-2 a.m.

On and after May 15th, and until September 1st, 1847, a train will leave Jamaica at 7 a.m. for Brooklyn—leave Brooklyn at 6 p.m. for Jamaica, and will land and receive passengers at any place between Brooklyn and Jamaica.

On Sundays—leave Brooklyn at 8 1-2 a.m. for Farmingdale; leave Farmingdale at 4 p. m. for Brooklyn.

Freight Trains—leave Brooklyn at 10 a.m. for Greenport; leave Greenport at 12 m. for Brooklyn.

Baggage crates will be in readiness at the foot of Whitehall street, to receive baggage for the several trains, 30 minutes before the hour of starting from the Brooklyn side.

The steamer "Statesman," Captain Nash, leaves Greenport for Sag Harbor on the arrival of the Accommodation train from Brooklyn.
5tf DAVID S. IVES, Sup't.

NEW YORK AND PHILADELPHIA RAILroad line—direct. Via Newark, New Brunswick, Princeton, Trenton, and Bristol. (Through in six hours.) Leaving New York daily from the foot of Liberty street.

Morning line.....9 o'clock a.m.
Mail pilot line.....4½ " p.m.

The lines proceed direct to Bristol without change of cars, and thence by the new steamer, "John Stevens," to Philadelphia.

FARE BETWEEN NEW YORK & PHILA.

First class cars.....$4 00
Second class cars..... 3 00

Passengers will procure their *Tickets* at the office foot of Liberty st., where a commodious steamboat will be in readiness with Baggage-crates on board.

Fifty pounds of baggage will be allowed to each passenger in this line, and passengers are expressly prohibited from taking anything as baggage but their wearing apparel, which will be at the risk of the owner.

Philadelphia Baggage-crates are conveyed from city to city, without being opened by the way. Each train is provided with a car, in which are apartments and dressing rooms expressly for ladies' use

Returning, the lines leave Philadelphia from the foot of Walnut st. at 9 a.m, and 4 1-2 p.m.

The lines for Baltimore leave Philadelphia daily except Sundays, at 8 a.m., 3½ and 10 p.m., and Sundays only at 10 p.m.—being a continuation of the line from New York. 25tf

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WESTERN RAILROAD.—ON AND AFter Monday, April 5, 1847, the passenger trains will leave daily, Sundays excepted, as follows:

Boston at 8 a. m. and 4 p. m. for Albany.

Albany at 7 1-4 a. m. and 5 p. m. for Boston.

Springfield at 8 1-2 a. m. and 1 p. m. for Albany

Springfield at 8 1-2 a. m. and 1 1-2 and 3 p. m. (or on arrival of the train from New York) for Boston.

Day line to New York, via Springfield.—The steamboat train leaves Boston at 6 a. m., and arrives in New York at 7 p. m., by the steamboats Traveller, New York, or Champion. Returning, leaves New York at 6 1-4 a. m., and arrives in Boston at 7 p. m.

Night line to New York.—Leaves Boston at 4 p. m., and arrives in New York at 5 a. m.

Albany and Troy.—Leave Boston at 8 a. m., Springfield at 1 p. m., and arrive in Albany at 6 p. m.; or, leave Boston at 4 p.m., Springfield next morning at 8 1-2, and arrive in Albany at 1 1-2 p.m.

The Troy trains connect at Greenbush.

The trains for Buffalo leave at 7½ a.m. and 7 p.m.

For Northampton, Greenfield, etc.—The trains of the Connecticut River Railroad leave Springfield at 8 1-4 a.m., 1 and 3 p.m., and passengers proceed directly on to Brattleboro', Windsor, Bellows Falls, Walpole, Hanover, Haverhill, etc.

For Hartford.—The trains leave Springfield on the arrival of the trains from Boston.

The trains of Pittsfield and North Adams Railroad leave Pittsfield on the arrival of the trains from Boston.

N. B.—No responsibility assumed for any baggage by the passenger trains, except for wearing apparel not exceeding the value of fifty dollars, unless by special agreement.

JAMES BARNES, Sup't and Eng'r.
C. A. SEAD, Agent, 27 State street, Boston.

GREAT SOUTHERN MAIL LINE! VIA Washington city, Richmond, Petersburg, Weldon and Charleston, S. C., direct to New Orleans. The only Line which carries the Great Southern Mail, and Twenty-four Hours in advance of Bay Line, leaving Baltimore same day.

Passengers leaving New York at 4½ P.M., Philadelphia at 10 P.M., and Baltimore at 6½ A.M., proceed without delay at any point, by this line, reaching Richmond in *eleven*, Petersburg in *thirteen and a half hours*, and Charleston, S. C., in *two days* from Baltimore.

Fare from Baltimore to Charleston.....$21 00
" " " Richmond..... 6 60

For Tickets, or further information, apply at the *Southern Ticket Office*, adjoining the *Washington Railroad Office*, Pratt street, Baltimore, to
1y14 STOCTON & FALLS, Agents.

NEW YORK AND ERIE RAILROAD LINE SUMMER ARRANGEMENT. For passengers, twice each way daily, (except Sunday,) leave New York from the foot of Duane St. at 7 o'clock, A. M. and at 4 o'clock, P. M. by steamboat, for Piermont, thence by cars to Ramapo, Monroe, Chester, Goshen, Middletown, Otisville, and the intermediate stations.

The return trains for New York will leave Otisville at 6 30, A. M. and 4 15, P. M.; Middletown at 7 A. M. and 4 40, P. M.; Goshen at 7 22, A. M. and 5 3, P. M.; Chester at 7 35, A. M. and 5 18, P. M.

Fare between New York and Otisville, $1 50; way-fare in proportion.

FOR MILK—Leave Otisville at 5½ o'clock, morning and evening.

FOR FREIGHT—The barges "Samuel Marsh and "Henry Suydam, Jr." will leave New York (from the foot of Duane St.) at 5 o'clock, P. M. daily (except Sundays.)

No freight will be received in New York after 5 o'clock, P. M.

Freight for New York will be taken by the trains leaving Otisville at 10½ o'clock, A. M.; Middletown at 11½, A. M.; Goshen at 12½, P. M.; Chester at 1 o'clock, P. M., etc., etc.

For farther particulars, apply to J. F. CLARKSON, Agent, corner of Duane and West Sts., New York, or to S. S. POST, Superintendent Transportation, Piermont.

24tf H. C. SEYMOUR, Sup't.

LITTLE MIAMI RAILROAD COMPANY. Fall and Winter Arrangement, 1847. On and after Monday, September 20th, until further notice, a Passenger train will run as follows:

Leave Cincinnati daily at 9 A. M., for Milford, Foster's Crossing, Deerfield, Morrow, Fort Ancient, Freeport, Waynesville, Spring Valley, Xenia, Yellow Springs, and Springfield. Returning, will leave Springfield at 4½ a.m. Upward train arrives at Springfield at 2½ p.m. Downward train arrives at Cincinnati at 10½ a.m.

Freight trains will run each way daily.

Messrs. Neil, Moore & Co. are running the following stage lines in connection with the road:

A daily line from Xenia to Columbus and Wheeling, carrying the great Eastern mail.

Daily lines from Springfield to Columbus, Zanesville and Wheeling. Also to Urbana and Bellefontaine.

A line of Hacks runs daily in connection with the train between Deerfield and Lebanon.

Passengers leaving for New York and Boston, arrive at Sandusky city via Urbana, Bellefontaine & the Mad River and Lake Erie railroad, in 27 hours, including several hours' sleep at Bellefontaine. To the same point via Columbus, Delaware, Mansfield and the Mansfield and Sandusky city railroad, is 32 hours. Distance from Cincinnati to Springfield by railroad ..... 84 miles.

From Springfield to Bellefontaine by stage, over a good Summer road ..... 32 "

From Bellefontaine to Sandusky by railroad ..... 102 "

FARE—From Cincinnati to Lebanon $1 00
" " " Xenia 1 50
" " " Springfield.. 2 00
" " " Columbus... 4 00
" " " Sundusky city 7 00

The Passenger trains runs in connection with Strader & Gorman's line of Mail Packets to Louisville.

Tickets can be procured at the Broadway Hotel, Dennison House, or at the Depot of the Company on East Front street.

Further information and through tickets for the Stage lines, may be procured at P. Campbell, Agent on Front street, near Broadway.

The company will not be responsible for baggage beyond 50 dollars in value, unless the same is returned to the conductor or agent, and freight paid at of a passage for every $500 in value over that amount.

47tf W. H. CLEMENT, *Sup't.*

BALTIMORE AND SUSQUEHANNA Railroad.—Reduction of Fare. Morning and Afternoon Trains between Baltimore and York.—The Passenger trains run daily, except Sunday, as follows:

Leaves Baltimore at ..... 9 a.m. and 3½ p.m.
Arrives at ..... 9 a.m. and 6½ p.m.
Leaves York at ..... 5 a.m. and 3 p.m.
Arrives at ..... 12½ p.m. and 8 p.m.
Leaves York for Columbia at.. 1½ p.m. and 8 a.m.
Leaves Columbia for York at.. 8 a.m. and 2 p.m.

FARE.

Fare to York $1 50
" Wrightsville 2 00
" Columbia 2 12½
Way points in proportion.

PITTSBURG, GETTYSBURG AND HARRISBURG.

Through tickets to Pittsburg via stage to Harrisburg $9
Or via Lancaster by railroad 10
Through tickets to Harrisburg or Gettysburg .. 3
In connection with the afternoon train at 3½ o'clock, a horse car is run to Green Spring and Owing's Mill, arriving at the Mills at ..... 5½ p.m.
Returning, leaves Owing's Mills at ..... 7 a.m.

D. C. H. BORDLEY, *Sup't.*
31 1y Ticket Office, 63 North st.

LEXINGTON AND OHIO RAILROAD. Trains leave Lexington for Frankfort daily, at 5 o'clock a.m., and 2 p.m. Trains leave Frankfort for Lexington daily, at 8 o'clock a.m. and 2 p.m. Distance, 28 miles. Fare $1·25.

On Sunday but one train, 5 o'clock a.m. from Lexington, and 2 o'clock p.m. from Frankfort.

The winter arrangement (after 15th September to 15th March) is 6 o'clock a.m. from Lexington, and ma. 9. from Frankfort, other hours as above. 351y

CENTRAL AND MACON AND WESTERN Railroads, Ga.—These Roads with the Western and Atlantic Railroad of the State of Georgia, form a continuous line from Savannah to Oothcaloga, Ga., of 371 miles, viz:

	Miles.
Savannah to Macon—Central Railroad	190
Macon to Atlanta—Macon and Western	101
Atlanta to Oothcaloga—Western and Atlaniic..	80

Goods will be carried from Savannah to Atlanta and Oothcaloga, at the following rates, viz:

	To Atlanta.	To Oothcaloga.
On Weight Goods—Sugar, Coffee, Liquor, Bagging, Rope, Butter, Cheese, Tobacco, Leather, Hides, Cotton Yarns, Copper, Tin, Bar & Sheet Iron, Hollow Ware & Castings	$0 50	$0 75
Flour, Rice, Bacon in Casks or boxes, Pork, Beef, Fish, Lard, Tallow, Beeswax, Mill Gearing, Pig Iron and Grind Stones	0 50	0 62½
On Measurement Goods—Boxes of Hats, Bonnets and Furniture, per cubic foot	0 20	0 26
Boxes and Bales of Dry Goods, Saddlery, Glass, Paints, Drugs and Confectionary, per cubic foot	0 20	pr. 100lbs. 35
Crockery, per cubic foot	0 15	" " 35
Molasses and Oil, per hhd., (smaller casks in proportion).	9 00	12 50
Ploughs, (large,) Cultivators, Corn Shellers, and Straw Cutters, each	1 25	1 50
Ploughs, (small,) and Wheelbarrows	0 80	1 05
Salt, per Liverpool Sack	0 70	0 95

Passage—Savannah to Atlanta, $10; Children, under 12 years of age, half price, Savannah to Macon, $7.

☞ Goods consigned to the subscriber will be forwarded free of Commissions.

☞ Freight may be paid at Savannah, Atlanta or Oothcaloga.

F. WINTER, *Forwarding Agent, C. R. R.*
Savannah, Aug. 15th, 1846. 1y34

BALTIMORE AND OHIO RAILROAD. MAIN STEM. The Train carrying the Great Western Mail leaves Baltimore every morning at 7½ and Cumberland at 8 o'clock, passing Ellicott's Mills, Frederick, Harpers Ferry, Martinsburgh and Hancock, connecting daily each way with—the Washington Trains at the Relay House seven miles from Baltimore, with the Winchester Trains at Harpers Ferry — with the various railroad and steamboat lines between Baltimore and Philadelphia and with the lines of Post Coaches between Cumberland and Wheeling and the fine Steamboats on the Monongahela Slack Water between Brownsville and Pittsburgh. Time of arrival at both Cumberland and Baltimore 5½ P. M. Fare between those points $7, and 4 cents per mile for less distances. Fare through to Wheeling $11 and time about 36 hours, to Pittsburgh $10, and time about 32 hours. Through tickets from Philadelphia to Wheeling $13, to Pittsburgh $12. Extra train daily except Sundays from Baltimore to Frederick at 4 P. M., and from Frederick to Baltimore at 8 A. M.

WASHINGTON BRANCH.

Daily trains at 9 A. M. and 5 P. M. and 12 at night from Baltimore and at 6 A. M. and 5½ P. M. from Washington, connecting daily with the lines North, South and West, at Baltimore, Washington and the Relay house. Fare $1 60 through between Baltimore and Washington, in either direction, 4 cents per mile for intermediate distances. s13y1

CENTRAL RAILROAD—FROM SAVANNAH to Macon. Distance 190 miles. This Road is open for the transportation of Passengers and Freight. Rates of Passage, $8 00. Freight—

On weight goods generally... 50 cts. per hundred.
On measurement goods ..... 13 cts. per cubic ft.
On brls. wet (except molasses and oil) ..... $1 50 per barrel.
On brls. dry (except lime) ... 80 cts. per barrel.
On iron in pigs or bars, castings for mills, and unboxed machinery ..... 40 cts. per hundred.
On hhds. and pipes of liquor, not over 120 gallons ..... $5 00 per hhd.
On molasses and oil ..... $6 00 per hhd.

Goods addressed to F. WINTER, Agent, forwarded free of commission. THOMAS PURSE,
y40 Gen'l. Sup't. Transportation.

SOUTH CAROLINA RAILROAD.—A Passenger Train runs daily from Charleston, on the arrival of the boats from Wilmington, N. C., in connection with trains on the Georgia, and Western and Atlantic Railroads—and by stage lines and steamers connects with the Montgomery and West Point, and the Tuscumbia Railroad in N. Alabama.

Fare through from Charleston to Montgomery daily $26 50
Fare through from Charleston to Huntsville, Decatur and Tuscumbia 22 00

The South Carolina Railroad Co. engage to receive merchandize consigned to their order, and to forward the same to any point on their road; and to the different stations on the Georgia and Western and Atlantic railroad; and to Montgomery, Ala., by the West Point and Montgomery Railroad.

125 JOHN KING, Jr, *Agent.*

THE WESTERN AND ATLANTIC Railroad.—This Road is now in operation to Oothcaloga, a distance of 80 miles, and connects daily (Sundays excepted) with the Georgia Railroad.

From Kingston, on this road, there is a tri-weekly line of stages, which leave on the arrival of the cars on Tuesday, Thursday and Saturday, for Warrenton, Huntsville, Decatur and Tuscumbia, Alabama, and Memphis, Tennessee.

On the same days, the stages leave Oothcaloga for Chattanooga, Jasper, Murfreesborough, Knoxville and Nashville, Tennessee.

This is the most expeditious route from the east to any of these places.

CHAS. F. M. GARNETT,
Chief Engineer.
Atlanta, Georgia, April 16th, 1846. 1y1

PHILADELPHIA AND READING RAILROAD.—Passenger Train Arrangement for 1847.

A Passenger Train will leave Philadelphia and Pottsville daily, except Sundays, at 9 o'clock A. M.

The Train from Philadelphia arrives at Reading at 12 18 M.

The Train from Pottsville arrives at Reading at 10 43 A. M.

Fares.	Miles.	No. 1.	No. 2.
Between Phila. and Pottsville,	92	$3·50 and	$3·00
" " Reading,	58	2·25 and	1·90
" Pottsville "	34	1·40 and	1·20

Five minutes allowed at Reading; and three at other way stations.

Passenger Depot in Philadelphia corner of Broad and Vine streets. 8tf

PHILADELPHIA, WILMINGTON & BALTIMORE RAILROAD.—1847.

Summer Arrangement.

Philadelphia for Baltimore...8 a.m. and 10 p.m.
Baltimore for Philadelphia...9 a.m. and 8 p.m.
Connecting with Mail Lines North, South & West.

On Sundays, only the 10 *P. M. Lines run.*

The Boat Lines, via Newcastle & Frenchtown R.R.
Leave Philadelphia at 3½ p.m. } No line on Sun-
Leave Baltimore at 3 p.m. } day.

Accommodation Trains between Philadelphia & Wilmington.—Philadelphia to Wilmington, 8 a.m., *mail*, 12½ p.m., 4 p.m., 7 p.m., 10 p.m. *mail*. Wilmington to Philadelphia, 7 a.m., 1 p.m., *mail*, 4½ p. m., 7 p.m., 12½ a.m., *night mail*.

J. R. TRIMBLE,
2tf *Engineer and General Superintendent.*

GEORGIA RAILROAD. FROM AUGUSTA to ATLANTA—171 MILES.

AND WESTERN AND ATLANTIC RAILROAD FROM ATLANTA TO DALTON, 100 MILES.

This Road in connection with the South Carolina Railroad and Western and Atlantic Railroad now forms a continuous line, 408 miles in length, from Charleston to Dalton (Cross Plains) in Murray county, Ga.—32 miles from Chattanooga, Tenn.

RATES OF FREIGHT.		Between Augusta and Dalton. 271 miles.	Between Charleston and Dalton. 408 miles.
1st class.	Boxes of Hats, Bonnets, and Furnature, per cubic foot	$0 18	$0 28
2d class.	Boxes and Bales of Dry Goods, Sadlery, Glass, Paints, Drugs and Confectionary, per 100 lbs.	1 00	1 50
3d class.	Sugar, Coffee, Liquor, Bagging, Rope, Cotton Yarns, Tobacco, Leather, Hides, Copper, Tin, Feathers, Sheet Iron, Hollow Ware, Castings, Crockery, etc.	0 60	0 85
4th class.	Flour, Rice, Bacon, Pork, Beef, Fish, Lard, Tallow, Beeswax, Bar Iron, Ginseng, Mill Gearing, Pig Iron, and Grindstones, etc	0 40	0 65
	Cotton, per 100 lbs	0 45	0 7
	Molasses, per hogshead	8 50	13 50
	" " barrel	2 50	4 25
	Salt per bushel	0 18	
	Salt per Liverpool sack	0 65	
	Ploughs, Corn Shellers, Cultivators, Straw Cutters, Wheelbarrows	0 75	1 50

German or other emigrants, in lots of 20 or more, will be carried over the above roads at 2 cents per mile.

Goods consigned to S. C. Railroad Co. will be forwarded free of commissions. Freight payable at Dalton.

F. C. ARMS,
Sup't. of Transportation.
Augusta, Ga., *July* 15, 1847. 41·1y

RATES OF FREIGHT

On CHANDLER'S Through Transportation Line, between Charleston, S. C., or Savannah, Ga., and Decatur, Ala., and Knoxville, Tenn., and all intermediate points on the Tennessee River, viz:

Between Macon	and Decatur and immediate points.	0 22½		1 54		1 05	0 81 0 86
	and Knoxville & intermediate points.	0 22½		1 54		1 10	0 76
	and Chattanooga.						0 61
Between Augusta	and Decatur and intermediate points.	$0 24		1 70		1 15	0 85 0 90
	and Knoxville & intermediate points.	$0 24		1 70		1 20	0 80
	and Chattanooga.						0 65
Between Charleston or Savannah	and Decatur and intermediate points.	$0 32		2 20		1 35	1 05 1 10
	and Knoxville & intermediate points.	$0 32		2 20		1 40	1 00
	and Chattanooga.						$0 85

1st class.	Boxes of Hats, Bonnets and Furniture per foot	
2d class.	Boxes and Bales of Dry Goods, Shoes, Saddlery, Glass, Paints, Oils, (in cans) Drugs, Confectionaries, Shovels, Spades, Scythes, Smiths' Bellows, Baskets, Tubs, Sifters, Brooms and other light articles, per 100 lbs	
3d class.	Molasses, Sugar, Coffee, Liquor, Bagging, Rope, Cheese, Tobacco, Leather, Feathers, Hides, Wool, Copper, Tin, Sheet-iron, Nails, Casks, or Crates of Crockery, Hardware, and other heavy articles not enumerated below.	
4th class.	Flour, Bacon, (in casks or boxes) Pork, Beef, Lard, Tallow, Butter, Beeswax, Bales of Rags, Ginseng, Green and Dried Fruit, (in casks or sacks) Pig-iron and Linseed Oil, per 100 lbs	
	Cotton.	Per 100 lbs

Merchandize shipped from any of the northern ports, must be consigned to R. R. AGENT, CHARLESTON, S. C., or R. R. AGENT, SAVANNAH, GA.: and every package must be marked, care of B. CHANDLER, Chattanooga.

Charges will accompany the goods, and be collected by the boats on the Tennessee river, when delivered to the owner or consignee

No preference in the way of despatch, will be given to any produce intended for their line, but each lot will be sent off as it is received.

The warehouse of the undersigned will be enlarged during the summer, and an apparatus attached for hoisting or lowering freight to the river, without soil or injury.

He will have a train of wagons under his entire control, sufficient to conduct the fall business with great despatch.

B. CHANDLER.
Chattanooga, Tenn., July 1, 1847.

REGULAR RATES BETWEEN ATLANTA AND CHARLESTON OR SAVANNAH.

First class, per foot	$0 20
Second class, per 100 lbs	1 20
Cotton, per 100 lbs	0 55
Third class, per 100 lbs	0 60
Fourth class, per 100 lbs	0 50

DEAN, PACKARD & MILLS,

MANUFACTURERS OF ALL KINDS OF

RAILROAD CARS,

SUCH AS

PASSENGER, FREIGHT AND CRANK CARS,

— ALSO —

SNOW PLOUGHS AND ENGINE TENDERS OF VARIOUS KINDS.

CAR WHEELS and AXLES fitted and furnished at short notice; also, STEEL SPRINGS of various kinds; and

SHAFTING FOR FACTORIES.

☞ *The above may be had at order at our Car Factory,*
REUEL DEAN, ELIJAH PACKARD, ISAAC MILLS, } SPRINGFIELD, MASS.
1y48

RAILROAD IRON—800 TONS OF THE latest and most improved pattern of T Rail—weighing about 60 lbs. to the yard, for sale by
BOORMAN, JOHNSTON & CO.,
1m ja 1 119 Greenwich St., New York.

ENGINEERS and MACHINISTS.

THOMAS PROSSER, 28 Platt St. N. Y. (*See Adv.*)
J. F. WINSLOW, Albany Iron and Nail Works Troy, N. Y. (*See Adv.*)
TROY IRON AND NAIL FACTORY, H. Burden, Agent. (*See Adv.*)
ROGERS, KETCHUM & GROSVENOR, Patterson, N. J. (*See Adv.*)
S. VAIL, Speedwell Iron Works, near Morristown, N. J. (*See Adv.*)
NORRIS, BROTHERS, Philadelphia Pa. (*See adv.*)
FRENCH & BAIRD, Philadelphia. (*See Adv.*)
NEWCASTLE MANUFACTURING COMPANY, Newcastle, Del. (*See Adv.*)
ROSS WINANS, Baltimore, Md.
CYRUS ALGER & Co., South Boston Iron Co.
SETH ADAMS, Engineer, South Boston.
STILLMAN, ALLEN & Co., N. Y.
JAS. P. ALLAIRE, N. Y.
PHŒNIX FOUNDRY, N. Y.
ANDREW MENEELY, West Troy.
JOHN F. STARR, Philadelphia, Pa.
MERRICK & TOWNE, do.
HINCKLEY & DRURY, Boston.
C. C. ALGER, Stockbridge Iron Works Stockbridge, Mass.

AMERICAN RAILROAD JOURNAL.
OFFICE AT THE FRANKLIN HOUSE,
105 Chestnut Street,
PHILADELPHIA, PA.

This is the only periodical having a general circulation throughout the Union, in which all matters connected with public works can be brought to the notice of all persons in any way interested in these undertakings. Hence it offers peculiar advantages for advertising times of departure, rates of fare and freight, improvements in machinery, materials, as iron, timber, stone, cement, etc. It is also the best medium for advertising contracts, and placing the merits of new undertakings fairly before the public.

TERMS.—Five Dollars a year, *in advance.*

RATES OF ADVERTISING.

One page per annum	$125 00
One column "	50 00
One square "	15 00
One page per month	20 00
One column "	8 00
One square "	2 50
One page, single insertion	8 00
One columnn " "	3 00
One square " "	1 00
Professional notices per annum	5